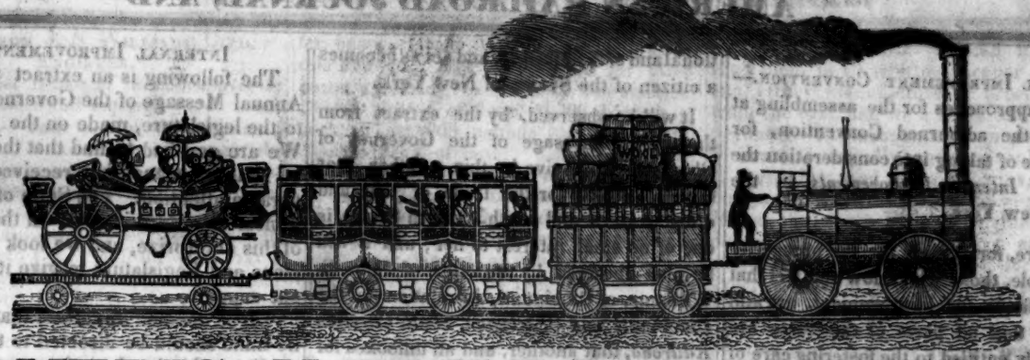


AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUALISHED WEEKLY, AT No. 7 WALL STREET, NEW-YORK, AT FIVE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, EDITOR.] SATURDAY, DECEMBER 19, 1835. [VOLUME IV.—No. 50.

CONTENTS:

Editorial Notices 785
Internal Improvement Convention 786
Letter from J. S. Williams, Civil Engineer, in relation to a Railroad from the Banks of the Ohio River to the Tide Waters of the Carolinas and Georgia . 787
Erie Canal; Sixth Annual Report of the Baltimore and Ohio Railroad Company (continued) . . . 788
Bergin's Patent Railway Buffing-Apparatus . . . 790
Burning of the Steamboat Walk-in-the Water, &c. . 792
Few Things Impossible; Trial for Forgery; Morris Canal Continued, &c. &c. 793
Agriculture, &c. 794
Literary Notices 798
Report of the Committee of 125 on the Amount of Property destroyed at the late Fire 799
Rochester Edge-Tools; The Laboring Classes in Europe, &c. 800

AMERICAN RAILROAD JOURNAL.
NEW YORK, DECEMBER 19, 1835.

☞ THE RAILROAD JOURNAL, although delayed TWO WEEKS by the late conflagration, by which nearly all my printing materials, and back volumes, and numbers, were destroyed, is *dated*, and *numbered*, as it would have been, if issued at its proper time—the two following numbers, which will complete the volume for 1835, will also be dated in the same way, in order to keep the volumes within their respective years.

This delay from the above cause has been unavoidable; I hope, however, to be able to issue the two ensuing numbers and the last of volume 4 in a few days—and also to bring out No. 1, of volume 5, in an improved style, by the 12*th* or 15*th* instant.

Editors of newspapers, who may receive this number, will, by giving it an insertion, or by referring to the facts, confer a particular favor on

their obedient servant,
D. K. MINOR.

New York, January, 1836.

We are promised, by our correspondent in Albany, and shall undoubtedly receive at early dates, copies of all important documents in relation to the subject of the Internal Improvements of this State, which we shall endeavor to lay before our readers.

LOSSES BY THE LATE CONFLAGRATION.—Amongst the other losses which we have sustained by the fire, is that of nearly all our *Railroad* and *Canal Reports*,—as well those which had *not*, as those which *had*, been republished, in whole or in part in the Journal. This will cause much inconvenience, as we had occasion frequently to refer to them—especially to those of the Baltimore and Ohio Railroad Company—the last of which was in course of republication.

We shall esteem it a great favor if our friends will favor us with duplicate copies at their earliest convenience.

TO CORRESPONDENTS.—We owe an apology to many of our correspondents, but to none perhaps as much as Major VOORHIES, of Avoylle Ferry, La., who has for years past furnished us with a monthly meteorological table, accompanied by remarks in relation to the weather, and crops of the country—which we have always published until within the last four months, and should have continued them regularly, during that time, but for having, for a time, mislaid those for August and September, which came together, and while the editor was confined to his room. They have however come to hand again, and will be published in our next, and those for October and November in the following number.

In the mean time, we publish the following extract from the Major's letter of December 6th, in relation to Texas. The address of the President of the Texian Council, which accompanied this letter, will appear next week.

Avoylle Ferry, on Red River, La., Dec. 6, 1835.

D. K. MINOR,
Editor Am. Railroad Journal:

Sir,—Enclosed is a copy of Meteorological Table for November, 1835, regularly entered as stated.

Most respectfully,
Your obedient servant,
P. G. VOORHIES.

I also enclose you a slip relating to Texas.

A report has reached us, *that wants confirmation*, that Gen. Cos sent out a detachment from St. Antoine—that the Texians defeated them, and took a brass *six* pounder. Whenever an official report reaches here, I will forward it.

Your obedient servant,
P. G. VOORHIES.

194 Rifle Volunteers, part from Kentucky, Tennessee, Mississippi, and Alabama—(from Natchez)—passed up this week, (in the steambont Statesman,) bound for Texas. (What will the volunteers do for provisions?)

BALTIMORE AND OHIO RAILROAD.—We commence the re-publication of the Report of Jonathan Knight, in relation to his examination of the route of this Railroad over the Alleganies, both to *Wheeling*, in Virginia, and to *Pittsburg*, in Pennsylvania; and shall continue it as soon as we can obtain another copy of the Report from Baltimore, ours, except a few pages, having been destroyed by the late fire.

This report should be attentively read by those who desire to obtain accurate information in relation to those, hitherto considered, almost impassable barriers, the Allegany mountains.

A route, and a far more favorable one than was anticipated, has been discovered, both to Pittsburgh and Wheeling, on which stationary power will not be required.

NEW JERSEY RAILROAD.—We find in the Newark Daily Advertiser of December 7th, an interesting account of the opening of the Railroad between Newark and Elizabethtown. We were aware that this work was progressing rapidly, but not that it was yet in readiness for use.

We also learn, that in a very few days it will be opened for use to Rahway, and, at an early period, to New Brunswick—thus completing another portion of the line between this city and Philadelphia, the whole of which, it is to be hoped, will ere long be in successful operation.

It was our intention to have published the account from the Daily Advertiser, but this long delay occasioned by the destruction of our office must be our apology.

When the road is opened to Rahway, we hope to participate in the pleasures of the event.

TENNESSEE.—This State seems resolved to act with energy. The Legislature have a Bill before them proposing to appropriate $500,000 to the Nashville and New Orleans Rail Road, $300,000 to the Western Rail Road Company; $1,500,000 to construct a Road from the Nashville and Orleans Rail Road to the eastern extremity of the State; $750,000 for a Rail Road from Charleston to Cincinnati through East Tennessee; and $300,000 to the Atlantic and Mississippi Rail Road.

INTERNAL IMPROVEMENT CONVENTION.—The time approaches for the assembling at Albany of the adjourned Convention, for the purpose of taking into consideration the subject of *Internal Improvements* in the State of New York.

There are, fortunately for the prosperity of the people, those who know and feel that extensive fields for improvement, are still open, and that all parts of the State are now equally entitled to the fostering care of liberal Legislation. They feel, too, that the fact that the State has expended large amounts of money to accomplish one or two important works, with their appendages, is no reason why other *equally* important works should be left for the enterprise of individuals. It may appear very clear to the more enlightened minds of some gentlemen who have made princely fortunes by the operation of those works which have been wholly constrpcted by the State, why other works—the utility of which will, to say the least, be every way equal, so far as the business community is concerned, to those already constructed—should be left to be "made and owned by the Company when done;" but to us, and thousands of others, whose only interest is to be found in the prosperity of all classes of community, and all parts of the country, it does appear passing strange that rational and honorable men, upon most subjects, should be found, who utterly oppose whatever may tend, *not* to depress them at all, but, to elevate their neighbors, in some degree to their level, by a liberal and general, as they themselves have been elevated by a partial, distribution, or rather *application*, of the resources of the State.

Why it is that men are so constituted it would seem difficult to divine; but so, unfortunately, it is, and we must therefore encounter, in all *great* enterprises, not only their *natural* difficulties, but also the prejudice, and interested opposition of some from whom *better* things would naturally be anticipated. It is to be hoped, however, that, at this Convention, the important subject upon which it shall have assembled will be considered, discussed, and treated with enlarged and liberal views; and that the interest, prosperity and happiness of the people, and the *whole* people, will be the leading and prominent principle of its action.

That the present is an important era in the history of New York, no one who has noted the signs of the times can doubt; nor that upon the proceedings of this Convention, her future progress and prosperity, so far as they can be effected, advanced, or retarded, by Internal Improvements or the want of them, in a great measure depends. It therefore becomes the duty of every man who may be selected to attend this Convention, and who has a particle of State pride and public spirit, to divest himself of sectional and selfish feeling, and act as becomes a citizen of the STATE of New York.

It will be observed, by the extract from the annual message of the Governor of Ohio, which we give in this number, that the competition for the trade of that, and other western and south-western States, is one of no small interest to her; and it will be also observed by the letter of John S. Williams, of Cincinnati, in relation to the *Cincinnati and Charleston, South Carolina Railroad*, that another, and an unlooked for competitor is about to enter the field for that trade. It is therefore *now* doubly the duty of those whose feelings and interests are all centered in the State of New York, to come forward and give their aid to all such works as will tend to retain the present, and secure the future trade of that vast and fertile region beyond the Lakes and the Alleganies.

Amongst these works, and perhaps the most important at this period, are the *New York and Erie Railroad*, the *New York and Albany Railroad*; on the east side of the Hudson; the *enlargement of the Erie, Canal, and connecting it with Oswego*; and a SHIP CANAL AROUND NIAGARA FALLS.—These are works which, when completed in a proper manner, and met, as they will be met by corresponding works from the west, will put all successful rivalry at defiance, and make this city *the London of the world*—that is the largest city in the world—but if, on the contrary, sectional feeling and self-interest are permitted to bear sway, and all improvements which do not pass through, or terminate at, any particular place, are to be opposed and defeated, then may we look elsewhere as we should deserve to, for the means of becoming what nature has destined us to be, and what but for a selfish suicidal policy we should be, the commercial emporium, *eventually*, of the world. Of the correctness of this prediction some may doubt, but one moments reflection by an intelligent mind, will satisfy it that there is no city in the world with equal natural and permanent advantages within itself for business; which has such an extensive, almost *unlimited*, and so fertile a country, intersected by such watercourses and studded by such inland seas, as New York! And nothing is wanting to make these important advantages available but a liberal spirit, and the active and determined perseverance of those who take pride in being citizens of the STATE of New York. It therefore becomes the imperative duty of this Convention to adopt such measures as will ensure the construction, at the earliest possible period, of those important works herein mentioned, together with such *intersecting* lines from the Lakes, and the Canal, with the New York and Erie Railroad, and from the New York and Albany Railroad, to the interior of New England, as will insure an easy, cheap, and rapid intercourse with all parts of *this*, and the adjoining States.

INTERNAL IMPROVEMENT.

The following is an extract from the Annual Message of the Governor of Ohio to the legislature, made on the 7th inst. We are gratified to find that the projected Niagara Canal, has received his favorable attention. The State of Ohio has a most important interest in the success of this enterprize, and we look to her citizens and Legislature to give it an efficient support.

"It is deemed important that the public mind should be directed to the various public works that have been projected in other States, which must have an important influence upon the interests of Ohio. In addition to those which have already been completed in New York and Pennsylvania, I would mention the construction of a ship Canal round the falls of Niagara, thereby uniting Lake Ontario with Lake Erie. (A report of a Committee in New York appointed to memorialize Congress on that subject, is herewith transmitted, marked A.) Thence as we progress south and south-west, we see the project of the great western Railroad from New York through Ohio to the Mississippi; the Chesapeake and Ohio canal; the Baltimore Railroad; the Winchester turnpike road; the James river canal, which is intended to be extended to the Ohio river, either by canal, Railroad or turnpike road; and the Charleston Railroad; (a branch of which, with a view to the construction of a turnpike road was some years since reconnoitered, passing through the Allegheny mountains at the head of Nolichucky in North Carolina, and extending thence through east Tennessee, western Virginia and the eastern part of Kentucky, to the Ohio river, opposite the Southern termination of the Ohio canal at Portsmouth.) The attention of the public, I am happy to learn, has been recently drawn to the importance of a communication between the southern Atlantic States and the great western States.—The project of a Railroad from Cincinnati, in this State, to Charleston in South Carolina, has excited the attention of the southern States. A report of the present committee of the Charleston Chamber of Commerce on the subject of the contemplated Railroad, from Charleston to Cincinnati, and the proceedings of the citizens of Charleston, embracing the report of the committee, and the address and resolution adopted at a general meeting in reference to the proposed railroad from Cincinnati to Charleston, are herewith transmitted for your consideration marked B and C. I perceive also in the communications of the Executives, of North Carolina and Georgia, to their respective Legislatures, that the attention of these States has been partially drawn to the important subject of direct communication with the North Western States. All these communications can be no less important to us in the West than they are to our neighbors in the South-East and North, and if accomplished, will unite us in a community of interests that must be highly beneficial to all.

LETTER FROM J. S. WILLIAMS, CIVIL ENGINEER,

To Dr. Daniel Drake, of the Committee of Correspondence and Inquiry:—

DEAR SIR,—Your note of the 18th inst., requesting me, if convenient, "to contribute any facts, observations, or suggestions, in addition to those contained in our report on the subject of the Cincinnati and Charleston Railroad," is received, and in answer thereto I may inform you that I have very few, if any, ideas not contained in that report, but have taken efficient measures to collect information, both general and particular, relative to every bearing of the subject, which shall be at the call of your committee as soon as it is in my possession.

The subject of connecting this city with Charleston, S. C. cannot be too closely examined nor too fully investigated. It is one that involves the interests, if not the destiny, of millions of Americans, born and unborn. The experiment we propose, differs in many respects from anything heretofore tried, and which, if carried out, would produce the happiest results. It would strengthen the bonds of union between the cotton-growing, slave-holding, and the wool-growing, victualing districts. It would cross a line of demarcation over which a work of internal improvement has not yet been prosecuted By means of the proposed work we should enter into the closest connection and union of feeling, with those to whom we are total strangers, farther than the mere circumstance of belonging to the same great confederacy makes us familiar. At present, in a national point of view, we have less sympathy for our fellow citizens of South Carolina, than we have with those of Louisiana, although the separation from the latter, both by distance and national origin, is greater than from the former Construct but the proposed work, and we should habitually call those our neighbors and friends, who now feel to us as foreigners. Intermarriages would take place, and personal acquaintance would be the result followed by friendships, instead of the present estrangement from those who are politically our brethren. As things are, some of us transfer our dislike of slavery to the persons of the slave owners; but were we more intimately acquainted with the circumstances that surround them, we should treat the subject as their misfortune,—not their crime; and instead of viewing the condition of slaves as always to be abhorred, we should be brought to believe that, odious as slavery in the abstract may be, it is often greatly to be preferred to degraded liberty. Our fellow citizens of the south, by becoming better acquainted with us, would not be so liable to mistake the opinions of a few for the prevailing sentiment of the north and west. Individually, I hail every effort to unite the slave holder and the non-slave holder more closely together, as tending to perpetuate our Union, to promote morality, increase religion, and establish universal freedom upon a proper and safe basis. The south, possessing a slave population, whose physical strength increases in a ratio greater than that of their owners, will, no doubt, view this additional bond of union with their white brethren as auspicious of their own safety.

It will not be on account of political economy alone that the south-east will see it her interest to be connected with the north-west. By the proposed work, her greatest emporium will be almost brought into juxtaposition with the most south-westwardly manufacturing city, and the greatest victualler in the U. States. Cincinnati, as a victualler, has no rival. Within one year from this day gone, she has shipped for other ports, agreeably to the best calculations, 130,000 barrels of flour, 84,500 barrels of pork, 17,000,000 pounds of bacon, and 255,000 kegs of lard! Large quantities of these supplies are now taken by steam, or floated to New Orleans, 1550 miles; they are there shipped, and after being navigated about the same distance, in hot climates, are landed at Charleston, which might arrive there, by the proposed Railroad, in six days after being packed in Cincinnati.

The same inducements that would cause Charleston to obtain her supplies by way of the Railroad, would make her the shipping port for the most of the exports of this country destined for Europe or the eastern States. One half of the flour and pork of Ohio, now finds a port at New-York, after traversing eight hundred miles by canal, lake, canal again, and river. Might not Charleston step forward and take a share in this important trade? Again, the eastern and European goods which we receive via New-York, Albany, Buffalo, Cleveland and Portsmouth, travel 1100 miles from New-York to Cincinnati by two rivers, two canals, and the lake. Could not Charleston compete with this upon 700 miles of Railroad? Is the harbor and enterprise of that city so inferior to those of New-York? Further, the merchandise we receive from Philadelphia travels by two Railroads, two canals, and one river, 850 miles, would not a Railroad and Charleston harbor be better than this line and the Delaware Bay? Further still, from Baltimore via Pittsburgh, should the Baltimore and Ohio Railroad terminate there, to Cincinnati would be about 800 miles, would the Chesapeake Bay and this line of transportation be preferred to 700 miles of Railway? Both cities are deeply interested in the proposition, in a commercial point of view, for in no case can the dangerous and long route by the Gulf of Mexico and Mississippi and Ohio Rivers never as closely connect them as their mutual interest requires, but as other channels of transportation are opened, Cincinnati and Charleston will become greater strangers.

Add to a commercial, our manufacturing character, and a connection with us will appear still more important. We manufacture almost every American article that the southeast wants, and which we would gladly barter for merchandise taken by her in commercial transactions with the eastern States and Europe. We have upwards of fifty steam engines and much water power, in effective operation. Our steam engines rate from five to three hundred horse power each. They do almost every thing that the genius of man has yet done by steam on land, and are equal to the task of at least twenty thousand men. We are manufacturing, this summer, one hundred and eleven steam engines, and about twenty sugar mills—the engines mostly very large, and many of the very largest class. The manufacture of these takes most of the power of ten of the smaller class of our engines. Three more are in part employed in the manufacture of cotton gins. This is a new branch of manufacture among us, just springing into importance. In 1834, we made but fifty-five as the first experiment. This year we are making two hundred and forty-five, and preparations are in progress to supply the full demand next year, estimated at five hundred and thirty, and all for the Mississippi Valley. They average sixty saws—are set in cast frames, and beautifully finished. We can make and send them to Charleston cheaper than she can either manufacture or procure them from the east, had we a quick and safe conveyance. The southeast requires at least a thousand annually, and they could not only barter on good terms for gins, but for horses or steam engines to work them. When the above thirteen engines are deducted, we have all our large and some smaller ones, numbering about forty, doing every thing in which that useful power can to aid the labor of man. We are not, moreover, behind other cities in the performance of labor that takes the almost unaided human sinew to perform. Of this class is ship-building. The tonnage that our shipyards are about to get afloat this season, amounts to 5,452 tons, in twenty-five boats, from 93 to 512 tons burthen each. This is not mentioned as forming any part of my subject, farther than the business and importance of our city is connected with it.

By comparing the proposed Railroad with other prominent works of Internal Improvement, its importance will stand in bold relief. New-York is now about to double the size of her Erie Canal, and also to construct a Railroad parallel with it, the entire length of the State. Philadelphia has scaled the mountains, by Railroads and Canals, and with two turnpikes. Baltimore is about to do the same, by a Railroad, not satisfied with a turnkpike—Washington City is menacing the Alleghanies with the Chesapeake and Ohio Canal, and Richmond is looking this way,—and all for what? To prevent the fatness of the Ohio Valley from swimming down to New-Orleans! The experiment has not failed—New-York has enriched herself by it—Philadelphia is doing so—Baltimore, Washington, and Richmond, wish to do it, and Charleston may, if she enters for the prize. She stands in the front rank, and she will enter the list when she finds the course clear for southern competition, and she will win. New Orleans, too, finding that steambout navigation is too slow for her, stretches north to snatch the prize which the eastern cities are about to take; and her Nashville Railroad of about 650 miles is not considered too great a stake.

Compare that proposed work, parallel with a river capable of carrying 500 tons in one load, from point to point, with the work we are advocating, along no navigable stream. Compare the easy access of Charleston to the open Atlantic, with that of Orleans by 120 miles of river and 650 of dangerous Gulf navigation, and the difference is conspicuous. Will Nashville, will Tennessee, take that direction at all? Will she prefer 600 miles of Railway, through other States, that will deliver her produce in an unhealthy climate, behind the Gulf of Mexico and the reefs of Florida, to joining our road from Knoxville, when she will arrive at open sea with less distance? Will she prefer to pay other States her fare, when by a road through the centre of her own, she can rise to wealth and importance by the transit of her merchandize? Nay, we cannot think so. Nashville will find it to be her interest to unite with Charleston and Cincinnati, and by a union of effort, accomplish a work that will at once raise three or four States above midway importance. And who can say that within ten years from this day, a route from the mouth of the Ohio, by Nashville, Knoxville, and Charleston, will not only be the shortest and safest, but the cheapest route to Europe from the upper Missouri—the far, far West!

More might be added, but my time is

bids; less I fain would say, but my theme commands, and should I find that now, or at any future time the views of your committee have been advanced by me, it will be a source of gratification to your obedient servant,

JNO. S. WILLIAMS.

Cincinnati, August 22, 1835.

We have much pleasure in presenting some views in the following extract of a letter, to a correspondent in this city, solicited by us for publication, on this all-important subject. The writer, we trust, will pardon the liberty taken with his valuable communication, at a time when the enlargement of the Locks will claim the attention of the Canal Board and Legislature—and is a subject so interesting to this city, we may add, the whole State.

"The project of the enlargement of the Erie Canal is becoming better understood by the people in this section of the State, and great anxiety is felt at the result. The Canal Board are finding difficulties at every step. There is more difficulty in adhering to the channel of the present canal, than was anticipated. I am satisfied that a canal 70×7 feet, if properly located, from the Hudson to the Senaca river, would not occupy the bed of the Erie Canal, more than one-third or one-fourth of the distance—and but for the name of it, might as well be called a new canal. If the ground was not occupied on the north side of the Mohawk, I should say unhesitatingly that it would be better to make an entire new channel, from the Hudson to Lake Ontario. This would allow an entire new arrangement of the locks. The average lift of the present locks, is 8 feet; this is altogether too low. I would go as high as 12 or 16 feet. This would lessen their number, and consequently their cost, and the delay in passing them. The gates would be somewhat heavier, but with suitable fixtures, would be as easily worked. There are now 50 odd locks, from Utica to Albany. If this number could be reduced to 30 or 35, it would be a great point gained. I have just received a letter from one of the Engineers on the Lehigh Navigations, stating that the locks in that work, which are to be 100 by 20 feet, in the clear, are constructing with lifts of 20 to 30 feet. This is higher than I should venture to go, but it shows the views which intelligent Engineers are taking of the subject. As the act now reads, the Canal Board are authorised to erect duplicate locks. If the locks are widened to 17 or 18 feet, as they probably will be, they will admit boats of 150 tons or three times the tonnage of the present boats. The business on the canal must therefore increase three or four fold, before double locks will be required. Where then, is the necessity for expending money *at this time*, in the erection of double locks? There is another subject to which attention seems not to have been directed, and that is, the policy of erecting and maintaining farm bridges. For a Canal 70 feet wide these bridges should be at least 80 feet span, though I understand it is contemplated to make them 72 feet, setting the abutments on the berm side, ten feet *into the Canal*, which is very objectionable. These bridges, if properly built, will cost from 1200 to 2000 dollars each, and require 200 dollars per annum to keep them in repair, making the whole cost to the State, equal to an outlay of not less than 4000 dollars for each bridge. I am satisfied that one half this amount will, on the average, pay all the damage of removing them, while at the same time the navigation will be essentially improved."

Sixth Annual Report of the Baltimore and Ohio Railroad Company.

(Continued from our last.)

To PHILIP E. THOMAS,

Pres't Baltimore and Ohio Railroad Co.

Having recently made a reconnoissance with a view to a Railroad across the Alleghany mountains, from the Potomac River at Cumberland, in Maryland, to the Ohio River at Wheeling, and at the Flats of Grave Creek in Virginia, and also at Pittsburgh in Pennsylvania, I avail myself of the present occasion to report the results, and to offer such views in relation to the scheme as shall seem just and proper.

The construction of the Baltimore and Ohio Railroad, having reached the bank of the Potomac opposite to Harper's Ferry, and its further extension up that river towards Cumberland, being staid by the terms of the compromise between the Railroad and Canal Companies, until such time as the Canal shall be, or by its charter should be, completed to Cumberland; and the liberal grant of the State of Maryland, at the last session of the legislature, being calculated to ensure a speedy completion of the Chesapeake and Ohio Canal to that point, the present was deemed by many to be a proper time to make examinations, with a view to induce the extension of the Railroad from the same point to the Ohio River. The people of Wheeling, in that spirit of enterprise for which they are conspicuous, made the first movement to procure the examination, and having obtained thy approbation and my own consent, I undertook to make the reconnoissance at such time as I could be spared from the Railroad service here. In pursuance of this arrangement, I commenced at Cumberland in the month of May last, examining the several routes hereinafter described, and completed the service in the month of August; having during the time visited this city in June, upon the business of my office as Chief Engineer.

Upon reaching Wheeling with the examination, a route was likewise viewed to strike the Ohio River near Elizabethtown, at the flats of Grave Creek. This was done at the request, and upon the representations of the citizens of that place and vicinity.—A route was also examined to the city of Pittsburgh, as the grant of the State of Pennsylvania to the Baltimore and Ohio Railroad Company, for right of way, &c. through that State, required that if the main stem of the Railroad should not terminate at the Ohio River in the vicinity of Pittsburgh, then the said Company should construct simultaneously, a lateral Railroad from the main stem to that city. Such however, is the importance of the city of Pittsburgh, and its connection with the north and west, as well as with the great Lakes, that an examination to it, would have been amply justified in the absence of any legislative injunction to that effect.

Accompanying this report is a map of the country comprising such parts of Virginia, Maryland and Pennsylvania, as are necessary to exhibit the relation of the several routes, and connection of the more important places situated upon roads or water courses, or intersected by the several lines examined and marked upon the map. There is likewise represented the route of the Cumberland road to Wheeling, as constructed by the General Government, and the route surveyed and recommended for the Chesapeake and Ohio Canal, from Cumberland to Pittsburgh, by the United States' Board of Internal Improvement, and to this map reference is made for a better understanding of what is written in this report.

Instrumental levels and surveys having been executed from Cumberland along the principal ravines and water courses, and through the more noted passes across the mountain chains, also to Wheeling and Pittsburg, in the course of operations connected with the location and construction of the Cumberland road, and of the traces of routes for the contemplated Chesapeake and Ohio Canal—I have availed of the knowledge of heights and distances so ascertained, combined with those estimated in this reconnoissance, to infer the grades that it may be necessary to establish upon any given route with a view to a Railroad.

Passing from Cumberland in any direction towards the Ohio River, we meet with a succession of mountains and ridges, nearly parallel to each other, and ranging about northeast and southwest. The difficulties presented to the eye of the traveller in his course upon the common road across the Alleghanies, would seem to forbid the construction across them of any Railroad for the purpose of general and reciprocal trade and intercourse, much less one upon which the locomotive steam engine should ply with effect and speed.—Pursuing the route of the Cumberland turnpike road, already mentioned, in the direction towards Brownsville and Wheeling, we are almost continually ascending and descending the mountain slopes for a distance of sixty miles, to the western base of Laurel Hill, near Uniontown. At the town of Cumberland, beautifully situated upon the left bank of the North Branch of Potomac, at the mouth of Will's Creek, and at the eastern base of Will's mountain, the National Turnpike road commences, and ascends that creek, through a gap in that mountain; thence turning to the left of Braddock's run, it passes through the gap of Dan's mountain, and immediately commences the ascent of the Great Savage, or the Great Backbone mountain, as the same ridge is denominated where it divides the eastern and western waters southwest of the pass through it of Savage River. The summit of this mountain upon the road, is gained in about thirteen and a half miles from Cumberland; and the top of the Little Savage mountain, a mere spur of the Great Savage, is reached at a mile and a quarter further. Between this spur and the main ridge in what is called here the Cranberry Swamp, situated about two

miles northeast of the turnpike road, heads the Savage River, which runs a southwest course about twenty miles to its junction with Crabtree creek, and thence a southeastern course five miles to the Potomac, at about 30 miles by the course of the river, above Cumberland. Descending westward from the Little Savage to Bromley's, now Beall's tavern, the turnpike passes the ridge that here divides the eastern and western waters, or the Savage river and the Fishing branch of Piney run. This dividing ridge is called the Little Backbone mountain, and is here about 1737 feet above the level of Cumberland, or 2372 feet above the level of the tides of the Chesapeake.

The following table exhibits the principal summits, and some of the depressions traversed by this road, from its commencement at Cumberland, to its termination in Wheeling, at a point about 80 feet above the level of the Ohio River.

Names of places on the Cumberland Road.	Distance in miles.	Total distance from Cumberland.	Height in feet above Cumberland.	Height in feet above tide.
Cumberland,	00	00	00	635
Frost-town,	11	11	1255	1890
Great Savage mount. summit,	2½	13½	2032	2657
Savage river, 2 miles from its head,	½	14	1741	2376
Little Savage mount. summit,	½	14½	1900	2535
Little Backbone mountain, summit (at Beall's) dividing eastern and western waters,	½	15½	1737	2372
Meadow mountain summit,	5½	21	2019	2654
Casselman's river,	2½	23½	1443	2077
Negro mountain summit,	5½	29	2191	2826
Keyser's ridge summit, a spur of Negro mountain,	2	31	2208	2843
Winding Ridge summit,	4	35	1899	2534
Smythfield at Youghiogheny river,	6	41	770	1405
Barren Hill summit,	5	46	1815	2450
Woodcock Hill, or Briery mountain,	3	49	1865	2500
Laurel Hill, or most western mountain,	8½	57½	1777	2412
Munroe, at western base of Laurel Hill,	3	60½	430	1065
Uniontown,	2½	63	317	952
Cauley's Hill,	8	71	639	1274
Brownsville, at Monongahela river,	4	75	198	833
Hillsborough,	12	87	1115	1750
Washington,	12	99	771	1406
West Alexandria,	16	115	1162	1797
Wheeling, at Ohio river,	16	131	113	748

The height of Cumberland above tide is here assumed to be 635 feet, as stated by N. S. Roberts, in his Report to the Chesapeake and Ohio Canal Company upon the coal mines and Railway routes from the same to Cumberland, 18th Sept., 1829. The level of a point one mile below Cumberland is stated in the Report of the U. S. Board of Internal Improvement, signed S. Bernard, Brig. Gen., Wm. Tell Poussin, Capt. Top, Engrs., Wm. Howard, Civil Engr., Washington City, 23d Oct., 1826, to be 578 feet above tide: and this point is readily conceived to be 57 feet lower than the place in Cumberland selected by N. S. Roberts, as the base of his operations. In James Shriver's map, published in 1824, the level of Cumberland is assumed to be 537 feet above that of tide water, a height that has been corrected by subsequent levellings, and especially in those conducted by Col. Abert for the United States Board of Internal Improvement. The heights upon the turnpike road, in the preceding table, are partly taken from the profile of Shriver's map, but as the level of Cumberland was not accurate, and as the levels of the several points westward of that town, were deduced from the grades of the road which, although they may be sufficiently accurate for the purpose of such a road, are yet not so exact as levellings taken for a Canal or a Railroad, not to mention that no correction for the earth's curvature was made; some changes in the height above tide, have been made from Cumberland to Casselman's River—none, however, have been made beyond that stream, as the omission to correct for curvature would cause those parts to be represented too high: and they are yet too high, especially beyond the mountains. For instance, Brownsville, upon the river bank, about 50 feet above low water mark, is stated to be 833 feet above tide, whereas, it is probably but 730 feet, deduced as follows:

	Feet.
Monongahela River at Pittsburgh, according to levels for Chesapeake and Ohio Canal, (supposed at low water,) above tide,	648
Fall in the Mononongahela, from Brownsville to Pittsburgh, as ascertained at low water, by Dr. Howard,	30
Low water at Brownsville, above tide,	678
Add for height of street on river bank, say	52
Height of Cumberland Road at Brownsville, above time,	730

Wheeling is about 650 feet, Pittsburgh 700 feet, and Brownsville 730 feet above tide.

It will be seen, from what is stated in the table of the heights just given, that the Cumberland Road in traversing the several mountains and streams, frequently deviates very greatly from the same level, and sometimes the change is made in very short distances. The more prominent levels only are, however, here given. In additien to these, the number of hills and ravines crossed are very great, insomuch that the far greater proportion of the entire Road is either ascendidg or descending at four or five degrees, the latter being at the rate of 1 in abont 11½ or 460 feet per mile. To the view of the traveller upon this Road, therefore, as has been already remarked, the aspect of the conntry passed through would seem to deny the possibility of obtaining a graduation suitable for a Railroad of the description contemplated.

When, however, the object is a line suitable for a Canal or for a Railroad, the eye of science expands its view and embraces the widest field within the limits of practicability, and it is soon perceived that many of the formidable barriers encountered upon the turnpike road, have been rent asunder in the convulsions of nature, that stampt the great features of this portion of the earth's surface. After a little further investigation, it is found that all the mountain ridges, save one, have been severed, and that the gaps thus formed, afford so many passages for the streams that drain these high and humid regions, and that the rivers rising in, and flowing from, the single unbroken dividing ridge, the one eastward to the Potomac, and by it into the Chesapeake bay, and the other westward to the Monongahela, and by this stream into the Ohio river, are sufficiently direct, in their courses through these mountains, to afford one or more practicable routes for a Canal; should there be found a sufficiency of water for its supply, not only at the highest level where the ridge dividing the eastern and western waters must be pierced by a tunnel, but likewise at all the inferior levels throughout the line. It is seen that the same routes are entirely practicable for a Railroad, even if there should be a lack of water for a canal; and that a shorter tunnel, if any, will be required for the Railroad. Dispensing with the condition of any but a small supply of water, other routes entirely impracticable for a Canal, will be altogether feasible for a Railroad. Hence, with a view to the latter improvement, the field of examination is much wider than for the former.

In point of fact, two routes have been pronounced by the U. S. Board of Internal Improvement, practibable for the Chesapeake and Ohio Canal, from Cumberland, to Turkeyfoot, (the junction of the Youghiogheny river, Casselman's river and Laurel hill creek—the one 88 miles 1040 yards in length, 2837½ feet of lockage, and 1 mile 568 yards in length of tunnel; with a superincumbent ridge 233 feet high; the other 70 miles 1010 yards in length, 1961 feet of lockage, and 4 miles 80 yards in length of tunnel, with a superincumbent mountain 856 feet high above the tunnel level. The summit level of the one comprises a distance of 12 miles 1604¾ yards, of which 5 miles 832 yards are of deep cutting, (mostly in the glade of Deep Creek) beside the tunnel of 1 mile 568 yards just mentioned, whilst the summit level of the other, (by Will's creek and Flaugherty) is in length 5 miles 1280 yards, of which beside the tunnel of 4 miles 80 yards, there are 1200 yards of deep cutting. In either case the summit level and many miles of Canal, with the numerous locks upon the same, are to be supplied with water mainly from stupendous reservoirs, to be erected and maintained in the Youghiogheny, or the Casselman's river and their tributaries. From Turkeyfoot the route of the Canal continued upon the right bank of the Youghiogheny river to the Monongahela, and thence to Pittsburgh.

Mention is here made of the route surveyed and reported for the Chesapeake and Ohio Canal, in order to show their adaptation to a railroad, and in pursuance of that design there are extracted and here given, a few more notes, observations, and statements, from the report of the U. S. Board of Internal Improvement, already mentioned.

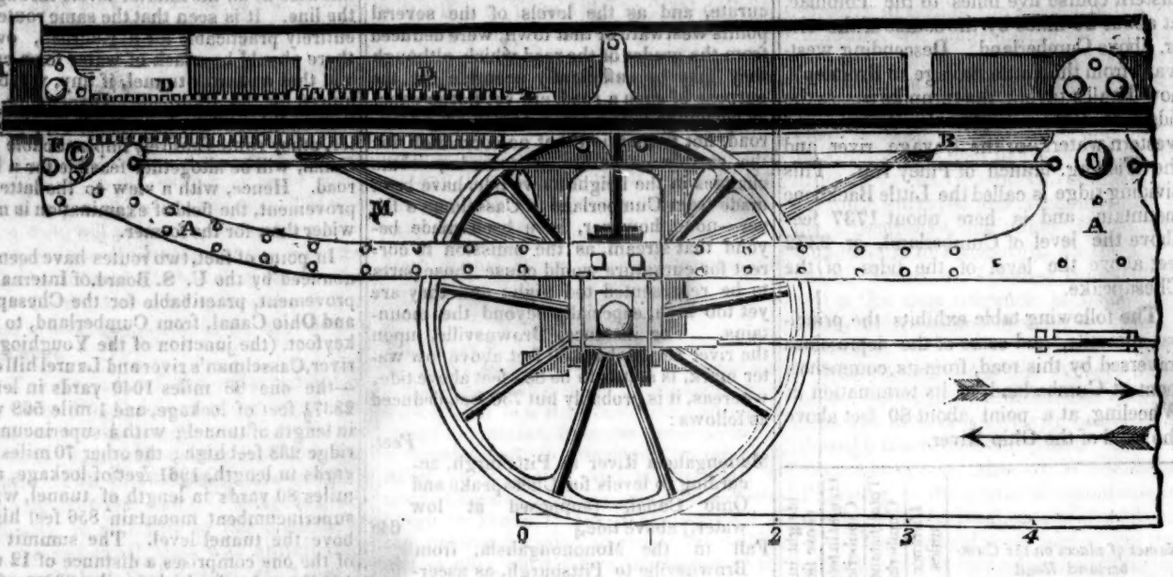
[To be continued.]

CURE FOR A CANCER.—Mr. Thomas Tyrell, of Missouri, advertised that a cancer upon his nose, which had been treated without success by Dr. Smith, of New-Haven, and the ablest surgeons in the western country, had been cured in the following manner: He was recommended to use a strong potash, made of the ashes of red oak bark boiled down to the consistence of molasses, to cover the cancer with it, and in about an hour afterwards cover it with a plaster of tar, which must be removed after a few days, and if any protuberances remain in the wound apply more potash to them, and the plaster again, until they shall disappear, after which heal the wound with common salve. Cautery and the knife had been previously used in vain. This treatment effected a speedy and perfect cure.—[Baltimore Farmer.]

STEAMBOAT LOST.—The steamboat Indian, arrived on Friday evening, reports the loss of the steamboat New Companion, Capt. Barlow, about fifty miles above the mouth of the Ohio River, in the Upper Mississippi.

BERGIN'S PATENT RAILWAY BUFFING-APPARATUS.

Fig. 1.



[From the London Mechanics' Magazine.]

BERGIN'S PATENT RAILWAY BUFFING-APPARATUS.

We have more than once had occasion to mention the ingenious buffing-apparatus which Mr. Bergin, the intelligent Secretary of the Dublin and Kingstown Railway, has applied to the carriages under his superintendence, and the good effects which have resulted from its adoption. Our attention is again drawn to the merits of the invention by the Third Annual Report of the Board of Public Works in Ireland, now before us, in which we find it spoken of in the following favorable terms :—

"Thomas F. Bergin, Esq., Secretary to the Company, has applied to the carriages a spring-bar (for which he has obtained a patent,) admirably adapted to ease the shock of sudden stopping or putting in motion, while, at the same time, it is more strong, more simple, and much more economical, and attended with other great advantages, over the system hitherto adopted."

A description of the apparatus, furnished by Mr. Bergin, and illustrated by engravings, is annexed to the Commissioners' Report. We shall now transfer the former, with but little abridgment, to our pages; and so much, also, of the latter as is necessary to a clear understanding of the construction of the apparatus.

MR. BERGIN'S DESCRIPTION.

Immediately after commencing the traffic on the Liverpool and Manchester Railway (the first on which long trains of carriages were moved by locomotive-engines at high velocities), it was found that every time a train was put in motion or stopped, violent concussions took place between the several carriages, equally disagreeable to the passengers and destructive to the carriages themselves. These concussions arose from the following cause, viz. by reason of the inertia of all heavy bodies, the same engine-power which would be adequate to draw a given load along a railway at any required speed, would not be sufficient to start the same load from a state of rest; it was therefore necessary to connect the several carriages by chains of considerable length, say three or four feet, by which arrangement the inertia of the train was, as it were, divided into as many parts as there were carriages, and these several parts being each within the power of the engine, were overcome in succession; but as the first carriage would have attained a certain amount of velocity when the connecting chain came to pull the second, this second must of course be at once dragged from rest into motion at a speed nearly equal to that already acquired by the first, and so on through the entire train. Now a very slight knowledge of the principles of mechanics teaches that the concussions already mentioned were the necessary results of the action described; the same principle (inertia) produced the same effects at stopping a train, and also at every change in the relative velocities of the individual carriages when in motion; and as the force of these shocks was dependent on the velocities, the greater the speed of travelling the more violent they became.

The obvious remedy for the evil complained of was to provide a means by which the full amount of motion acquired by any part of the train should be gradually, not instantaneously, communicated to the other parts: the elasticity of a spring was a suitable means, and an apparatus was accordingly added to the Liverpool and Manchester passenger coaches, a sketch of which is annexed, and which has been termed a buffing-apparatus.

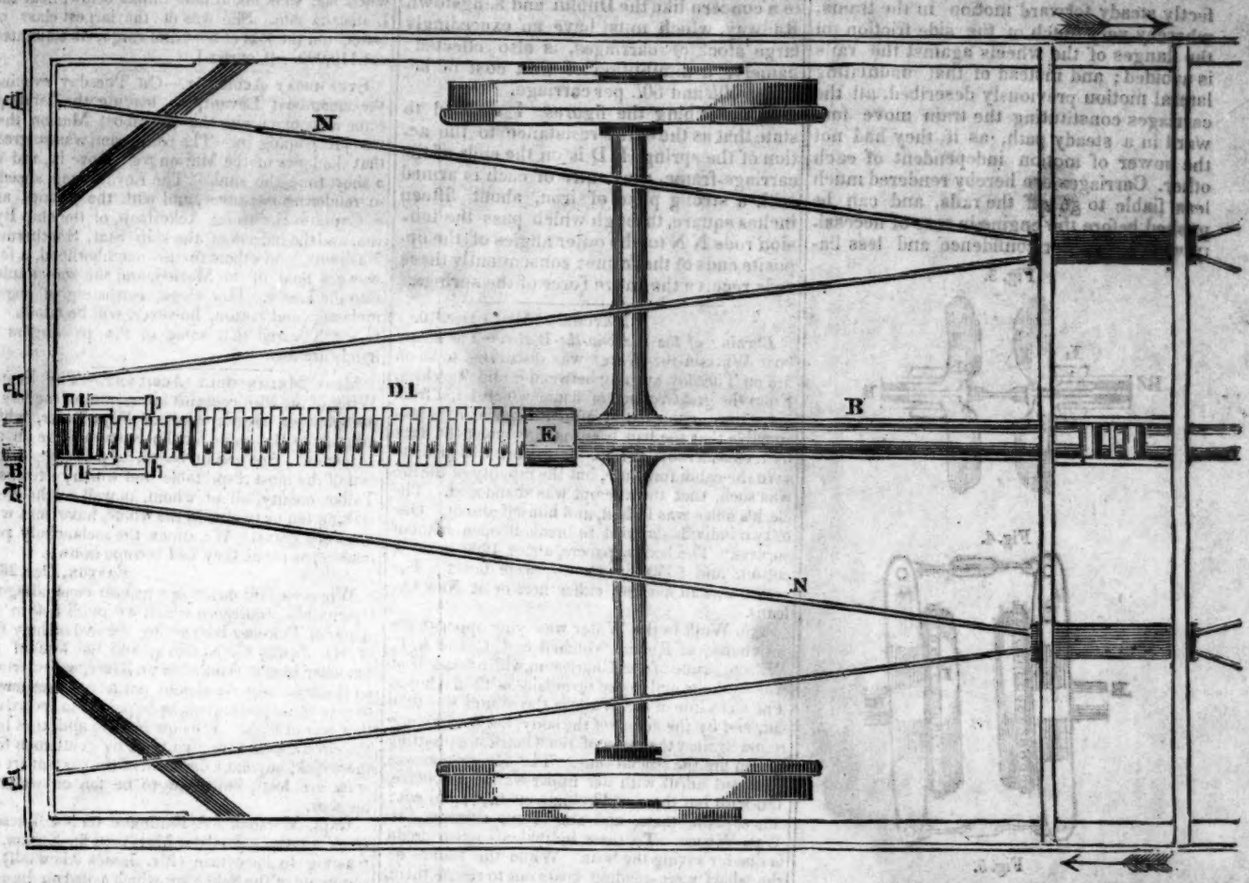
[Here follows a description of this apparatus] :—

This apparatus is complex, and consequently expensive; it also requires to be very strong, as on a little consideration it will be evident that the spring-bars, levers, and frame of the first carriage have to bear the resistance of the entire train; a very rigid spring is therefore necessary, the range of action of which is, of course, very limited, (in practice not exceeding a few inches,) consequently the concussions, although much diminished, are still very considerable. The apparatus being attached to the carriage-frame, which is, of course, supported on bearing springs, it rises and falls according to the load; whence it constantly occurs, from the carriages being unequally weighted, that the buffer-heads, opposed to each other, and which by right should be at the same level, vary by nearly their own diameter. Whence, in the event of a violent blow, the bars to which they are fastened are almost certain either to be bent so as not to play in their sockets, whereby the whole apparatus becomes inoperative; or else to be broken off (such we have found to be the case in every instance when an unusually severe blow took place.) After the apparatus described was added to the Liverpool and Manchester carriages, it was found that the train no longer proceeded with a steady motion in the direction of the rails, but that each carriage had acquired a very considerable lateral motion, by which the flanges of the wheels were constantly striking or rubbing against the rails, so as to cause a considerably increased resistance from side friction; indeed, on looking along a train of six or eight carriages, the serpentine motion is very striking. The cause of this unsteady motion will be evident, when we recollect that the point from which each carriage is drawn is in one direction, the centre, and in the other the after extremity. These considerations, the result of numerous careful examinations of the carriages on the Liverpool and Manchester Railway previous to ordering our own, led me to seek for a remedy; as on the Dublin and Kingstown Railway, so very large a proportion of the traffic of which would be passengers, the extent of which would be difficult to anticipate, but which must of necessity be immense, it became a matter of paramount importance to attain, as far as practicable, the most perfect comfort and security, and also to reduce, as much as poesible, the wear and tear of the numerous carriages which the company must provide. The apparatus which I designed, and which has been successfully applied to thirty-five of our carriages, is represented in plan, section, and elevation in the accompanying drawings.*

A slight frame of sheet-iron, AAA, consisting of two similar plates, three inches apart, each about 3-16ths thick, secured together by rivets, rests on turned bearings on the centres of the axles; a single bar,

* We have given the section and plan only (our figs. 1 and 2,) and have omitted the after-part of the carriage-frame in each, as it is an exact counterpart in every particular of the front part. We have also, for convenience sake, given detached views of the buffer-heads; figs. 3 and 4, being a section and plan of that in the front, and figs. 5 and 6, a section and plan of that in the rear.—Ed. M. M

Fig. 2.



BB, (I have used a welded iron tube of 5-16ths inches thick, and three inches diameter, as being the stiffest,) the entire length of the carriage, and extending about two feet beyond each end, passing through an oblong hole three inches wide and nine inches long (H, 4), is supported on this frame by rollers, CCC, allowing it to be moved lengthways with great facility; on this tube or bar BBB is placed at either end (without the framing of the carriage) about four feet of spiral springs, DDD, of graduated strengths; one end of each of these sets of springs rests against a strong collar or boss, E, fixed to the bar or tube, and the other end against a small box of iron, F, attached to the frame A, and furnished with one of the rollers C previously mentioned; also with the two friction rollers G and G projecting a little beyond its surface, and resting against the inner side of the carriage-frame end. To each extremity of the tube BB is attached a buffer-head, I, by means of a bar of iron K, passing through BB, and furnished with a nut and screw at each end; immediately within the buffer-head, and resting against it, is a bar of iron, L, for attaching the carriages together. It will be observed, that this apparatus lying loosely on the axles, is perfectly independent of the frame-work of the carriage, which is supported in the usual manner on bearing springs, MM, and, in consequence of the oblong holes HH, rises or falls according to the load without affecting the buffing apparatus. The action of the apparatus is as follows:—The train being to be moved in the direction of the upper arrow, the motive power is applied to L 1, and draws forward the central tube BB, thereby compressing the springs DD between the boss E and the friction roller-box F, which rests against the end of the carriage-frame, without moving this latter until the elastic force of the compressed springs becomes sufficient to overcome the resistance presented by the friction and inertia of the carriage, when the latter begins to move forward so gently as not to be perceptible to persons seated therein; the second and each succeeding carriage in the train is, by similar means, brought from a state of rest into motion, as (altogether independent of the springs DD,) the tube BB acts on B 2 merely as a simple connecting chain, rope, or bar, would. In case of a concussion from behind, or of one carriage running against another, it will be at once seen that the resistance is offered by the furthest end, the effect being to drive the tube BB forward, compressing the springs at the remote end; and the carriage will not be affected by the blow until (as in drawing the train) the elasticity communicated to the springs overpowers the inertia of the carriage, which then begins to move, actuated by a force just sufficient to start it; any ordinary velocity might be thus (theoretically) resisted by sufficient length of spring, without any strain or violence to the carriage receiving the blow; but practically, the springs are limited to about four feet, allowing a range of action of about two feet, beginning to be compressed by a force equal to about twenty pounds, and presenting a gross resistance to entire compression of upwards of two tons, and which have been found sufficient for all practical purposes. It will be observed, that as the springs of each carriage act totally independent of each other, and of all the carriages in the train, except to that to which they are attached, each has but to bear its own share of the resistance, the sum of which is made up of the separate resistances of all the springs acted on: thus, if one set offers a resistance equal to two tons receding through two feet, and that there be ten carriages in the train, the gross resistance to a concussion would be equal to twenty tons through two feet; and if the buffer-heads of each carriage were in contact, this gross amount of resistance would be opposed without the carriages being necessarily moved forward, as in the case of any obstruction on the rails, or any of them bearing more than two tons. On the contrary, in the other apparatus, supposing each spring also to resist a force of two tons, and to recede, as in the case in practice, about eight inches, each spring being acted on by all that preceded it, the resistance offered by a train of ten carriages would be but equal to two tons through ten times the space each separate spring moved, or $10 \times 8 = 80$ inches, or 6 feet 8 inches; consequently the first and each succeeding carriage would, to enable all the springs to act, be forced through a space equal to the sum of the spaces through which the separate springs act: thus the first carriage of the ten would be forced through eight inches for each of the remaining nine carriages, or in all six feet, and it is easy to conceive the difference of the effect in the two cases. Experiments have been tried on this railway, by placing a single carriage, fitted with the new apparatus, on the rails, and running an engine and tender against it with a velocity of six to seven miles an hour, without producing any injurious effect. I have more than once sat in a carriage so struck, without sustaining any injury or other effect greater than is felt on starting a train of carriages fitted with the old apparatus.

Another effect which has been realised by the adoption of this apparatus is a per-

fectly steady forward motion in the trains, whereby very much of the side friction of the flanges of the wheels against the rails is avoided; and instead of that undulating lateral motion previously described, all the carriages constituting the train move forward in a steady path, as if they had not the power of motion independent of each other. Carriages are hereby rendered much less liable to go off the rails, and can be pushed before the engine in case of necessity with far greater confidence and less liability to accident; as although the impulse is given to the central bar from behind, yet it is obvious the carriage is acted upon from the front, precisely as it would be if drawn in the same direction. I have frequently, during our experimental trials before opening the railway, propelled one and two carriages in this manner at a velocity of thirty miles per hour with perfect safety. The diminution of side friction necessarily diminishes the power requisite to draw a train: the amount of saving in this respect I have as yet been unable to ascertain experimentally with sufficient accuracy to state in this place; I have, however, ascertained that it is very considerable.

Fig. 3.

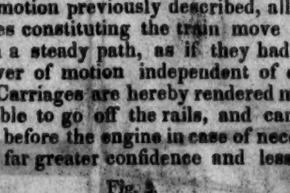


Fig. 4.

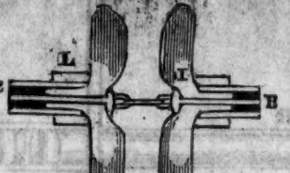


Fig. 5.

Fig. 6.

One other object, of no trifling importance to a concern like the Dublin and Kingstown Railway, which must have an exceedingly large stock of carriages, is also effected; namely, a diminution of first cost of between 50*l.* and 60*l.* per carriage.

In describing the figures, I omitted to state that as the entire resistance to the action of the springs D D is on the ends of the carriage-frame, the centre of each is armed with a strong plate of iron, about fifteen inches square, through which pass the tension rods N N to the outer angles of the opposite ends of the frame; consequently these rods receive the entire force of the springs.

NATCHEZ, (Miss.) Dec. 10.

Burning of the Walk-in-the-Water.—The steam boat Walk-in-the-Water was discovered to be on fire on Tuesday evening between 8 and 9 o'clock. From the great volume of flame which burst from her almost immediately after the alarm, it is presumable that she had been on fire under the deck for a considerable period. An effort was made to save the cabin furniture, but the rapidity of the fire was such, that the attempt was abandoned. The clerk's office was locked, and himself absent. One or two individuals tried to break it open without success. The books, papers, about 1200 bales of cotton, and $3500 in money, were burnt The cotton was all insured, either here or at New Orleans.

The Walk in the Water was lying opposite the warehouse of Robert Mitchell & Co., and A. L. Wilson, inside of the Charleston, which latter boat was cut loose and towed up outside of the flat boats. The stern line of the Walk in the Water was then cut, and by the action of the eddy, her stern swung round against the stern of the Charleston, setting her on fire the second time. The Charleston was then sent adrift with her upper works in a blaze, and with but three individuals on board, to wit: the captain, mate, and one of our citizens, Mr. Wm. Woods. To these individuals much credit is due for saving the boat. While the people on the wharf were sending boats out to rescue them, not expecting that the Charleston could be preserved, by the extraordinary exertions of these individuals the fire was got under, and with the assistance of those sent to take them off, was finally extinguished. Steam was then raised, and she was again brought up to the landing, having floated down one or two miles. In the mean time the Walk in the Water was a mass of flames, producing a bright glare for miles around her. To save the warehouses and stores within danger, she had also been cast adrift, and as she floated in the midst of the waters, was a magnificent sight.

The sides of the bluff were brightly illuminated, and the distant shore of Louisiana was traced as with a pencil dipped in gold; while the long line of smoke, which rose but a little above the bluff, and floated northward over the bed of the river, looked bright in contrast with the surrounding gloom; and as the unruffled surface of the water reflected back, with increased vividness, the burning mass, it presented a scene worthy of the painter.

A bear which was chained between the two decks, was burnt, and it is supposed that a human being also suffered.

A white man was seen, after the Walk-in-the-Water was cut adrift, at the stern of the boat, apparently in search of some object. He was hailed, and advised to come ashore. He replied; but all he said was not heard. He was understood so say, that he would not leave the boat until he found that for which he was in search. Report states, he was afterwards seen to fall, by the giving way of the deck, into the hold.

The bear being chained about midway of the upper deck, excited strongly the sympathies of the spectators. As the flames rose they were drawn between the decks, and met over the bear—as they shot upwards, first upon one side and then upon the other, he would leap in the contrary direction to escape, and would as often be opposed by a wall of fire. He finally made one desperate effort and cleared the deck, but did not break his chain. He attempted to raise himself by grasping his chain above, but he was soon suffocated.

The boat belonged to Captains Crain and Glover, who had just purchased her, and we have not learned whether she was insured or not.

The boat continued burning until this morning, when she sunk about four miles below, near the Louisiana side. She was of the largest class of boats, and the loss of boat and cargo, is estimated at $110,000.—[Courier.]

STEAMBOAT ACCIDENT.—On Tuesday evening the steamboat Levant, on leaving the landing, came in contact with the steamboat Marion that was just coming in. The concussion was so great that the bows of the Marion were stove in, and in a short time she sunk. The Levant was speedy in rendering assistance, and with the prompt aid of Captains E. Strong, Ackerman, of the ship Byron, and the officers of the ship Star, Southerner, Nashville, and others in the neighborhood, a fast was got hold of the Marion, and she was hauled into the Levee. Her cargo, consisting of sugar, molasses and cotton, however, will be a loss. It is much feared that some of the passengers or hands are lost.

MOST MELANCHOLY ACCIDENT.—The Easton Whig of the 26th contains an account of the loss of the schooner Hester Ann, of Wye River, which sailed from Baltimore for the Eastern shore on the 15 instant. She had on board, as passengers, several of the most respectable and worthy citizens of Talbot county, all of whom, as well as the crew, making ten or twelve in the whole, have met with a watery grave. We annex the melancholy particulars, as far as they had become known.

EASTON, Dec. 26.

When we laid down our pen on concluding the lamentable occurrence which we published in our paper of Tuesday last, giving the melancholy fate of Mr. JAMES G. ELLIOTT, and the loss of the schooner Hester Ann of Wye River, we entertained the hope that we should not have to resume it to give other particulars, or be pained to record further loss of lives. We now have to add, that from the circumstances related to us by gentlemen from the wreck, beyond a doubt all of the passengers and crew are lost; supposed to be ten or twelve in number.

Capt. Marshall left Baltimore on last Tuesday week in the steamboat Maryland for Easton, entrusting to his cousin (Mr. James Marshall) the command of the Schooner, which sailed on the same morning for Wye river. Our informant and Capt. Marshall both conversed with the passengers on the Monday night previous to their sailing, and in corroboration of the fact of their being on board the Hester Ann, Capt. Benny of the Easton Packet, actually recognized and conversed with them just before they parted company on the night of the accident.

The following are the individuals lost: James G. Elliott, John P. Paca, jr., Richard Baker, John Redman, James Marshall, and three colored men. It is also supposed there were several colored passengers on board.

Capt. Marshall, with several other gentlemen, reached the wreck on Tuesday morning last, and succeeded in getting out of her some freight; the trunks, and some wearing apparel of the unhappy sufferers, but found none of their bodies; those of Mr. Ellicott and the colored man (named Aaron Smyler) having been previously taken off by some of the people of Poplar Island. The schooner was found a perfect wreck, nearly under water, having bilged, it is supposed, after she capsized; the mainmast was carried away, and her anchor cast out; consequently they labored under much difficulty in searching the cabin; but from the circumstance of finding boots and shoes belonging to the sufferers, it is inferred they were below when the accident happened, probably abed. There was a large quantity of freight on board, principally owned by Mr. Paca, but so much injured as to render it unworthy of taking from the wreck. She was hauled ashore on Poplar Island and sold. Mr. Ellicott's body has been carried to the residence of his family, where it will be interred.

DREADFUL EARTHQUAKE.—The *Journal of Odessa* describes the ravages of a dreadful earthquake, which occurred on the 25th of August at Kaissarich, (the ancient Cæsarea in Cappadocia,) and the surrounding villages. On that day, about 5 in the afternoon, a thick column of smoke was seen to arise at the foot of Mount Ardeschch, (on the side of which the town is situated,) from which volumes of flame burst forth with an appalling noise. At the same moment the shocks of an earthquake began, and continued for several hours, accompanied by a noise like thunder. Those who survived the effects, describe their sensation as if they had been

on the surface of an ocean agitated by a storm. About 2000 houses were destroyed in that city. All the inhabitants that could effect their escape, fled into the country, but about 150 perished in the falling ruins. Up to the 1st September the surviving inhabitants were still in the fields, afraid to return to the city; and during that time three or four shocks were felt every day, but becoming gradually weaker. The destruction in the villages, to the distance of 140 miles, was terrific. Some were swallowed up; and the place of one of them, Kermetzi, was occupied by a large lake. The number of lives lost has not yet been ascertained, but it appears to have been very great.

FEW THINGS IMPOSSIBLE.—"It is impossible," said some, when Peter the great determined to set out on a voyage of discovery, through the cold nothern regions of Siberia, and over immense deserts; but Peter was not discouraged, and the *thing was done.*

"It is impossible," said many, when they heard of a scheme of good Oberlin's. To benefit his people, he had determined to open a communication with the high road to Strasburg, so that the productions of de la Roche (his own village,) might find a market. Rocks were to be blasted, and conveyed to the banks of the river Bruche, in sufficient quantity to build a wall for a road along its banks, a mile and a half, and a bridge across it. He reasoned with his people, but still they thought it was impossible; but he seized a pickaxe, put it across his shoulder, proceeded to the spot, and went to work, and the peasants soon followed him with their tools. The road and bridge were at length built, and to this day, the bridge bears the name of the "Bridge of Charity."

"It is impossible," said some, as they looked at the impenetrable forests which covered the ragged flanks and deep gorges of Mount Pilatus in Swiftzerland, and hearkened to the daring plan of a man named Rupp, to convey the pines from the top of the mountain to the Lake of Lucerne, a distance of nine miles. Without being discouraged by their exclamations, he formed a slide or trough of 24,000 pine trees, 6 feet broad, and from 4 to 6 feet deep; and this slide, which was contemplated in 1812, was kept moist. Its length was 44,000 English feet. It had been conducted over rocks, or along their sides, or over deep gorges where it was sustained by scaffolds; and yet skill and perseverance overcame every obstacle, and the thing was done. The trees slid down from the mountain into the lake with wonderful rapidity. The large pines, which were one hundred feet long, ran through the space of eight miles and a third in about six minutes.

A gentleman who saw this great work, says:—"Such was the speed with which a tree of the largest size passed any given point, that he could only strike it once with a stick as it rushed by, however quickly he attempted to repeat the blows."

Say not hastily, then, of any thing, "It is impossible." It may not be done in an hour, or a day, or a week; but perseverance will finally bring you to the end of it. "Time and patience," says a Spanish proverb, "will turn a mulberry leaf into silk."

[From the Jersey City Gazette.]

TRIAL FOR FORGERY.—Previous to the late fire in New-York, we had prepared for publication a statement of the following case, the copy for which was destroyed on that occasion; and the consequent derangement of our office has prevented an earlier attention to the subject on our part.

On the 8th of December last, before the Court of General Sessions for the City and County of New-York, the Recorder and Aldermen Taylor and Labagh presiding, NATHANIEL FREEMAN, of Aharsimus, was tried on an indictment for forgery in the third degree, in counterfeiting the signature of Arthur Tappan & Co., of New-York, to a note addressed to John Rankin, also of that city, requesting the loan of ten or twelve hundred dollars, with intent to defraud said Rankin thereof.

The District Attorney, for the prosecution, called Messrs. Lewis Tappan and John Rankin, who proved the forgery.

N. Nye Hall, of counsel for the defence, entered a plea of insanity, and called a great number of witnesses to sustain the plea; the most important of which were,

Mrs. Mary Hall, a highly respectable lady of 70 years of age, who had for a considerable time resided in the family of the accused, and had been acquainted with him from infancy. This witness testified that she had no doubt that Freeman was occasionally insane; and that she had the best reason for believing that the malady was hereditary, both his father and his mother having been subject to occasional fits of mental alienation.

Simon Healy had known the accused long and familiarly; had for some time past considered him partially deranged. A few months previous, Freeman had told witness that he felt a disposition to blow his own brains out; that he was frequently subject to a depression of spirits, which tempted him to commit suicide.

Col. Samuel L. Knapp had known Freeman many years, both in New-York and Boston; and from his universal uprightness of character and honorable conduct, believed it impossible that he should commit such an act as that charged in the indictment, unless laboring under an aberration of mind.

Gen. Robert Swartwout, Dr. J. D. Garner, and many other highly respectable witnesses, gave similar evidence; and all testified to the good character and integrity of demeanor of the prisoner, previously to the commission of the act for which he was now on trial; and were unanimous in the belief that he was subject to occasional fits of hallucination, especially on subjects connected with religion and the abolition of slavery, to the latter of which subjects allusion was made in the note for the writing of which he was now on trial.

So full and clear was the evidence to the fact of insanity, that the Jury, in reply to a question from the Recorder, whether they were satisfied of that fact, rendered an immediate verdict of acquittal, without leaving their seats.

The verdict was received with great and unfeigned satisfaction, by the numerous friends of the accused, whom the occasion had called together, and in company of whom he left the court.

We are sincerely happy at this clear and impartial decision of an affair which had caused a deep and melancholy sensation in the minds of the highly respectable circle in which Mr. F. and his amiable family had moved.—[Jersey City Gazette.]

MORRIS RAILROAD CONTINUED.—An application will be made to the Legislature, at its next sitting, for a law authorising the construction of a Railroad from Morristown, by the most eligible route, through Sussex and Warren counties, to the Delaware River, at or near the Water Gap.

The Belvidere Apollo states, that the bridge over the Delaware, at that place, is now completed, and ready for the passage of any description of vehicles, at a very reasonable toll.

A writer in the Sussex Register recommends the construction of a railroad through that county, from the coal region on their west, to the Hudson River at New-York.

BANK OF NEW-BRUNSWICK.—The N. Y. Commercial Advertiser says:—"It is understood that bills of this Bank, amounting to about $20,000, put in circulation previous to its bankruptcy the 18th February, 1834, have never been redeemed by the Bank, or presented to the receivers, and that many of them are now offered for sale. The public are cautioned not to receive these bills, as the time limited to the creditors of the Bank expired on the 4th of May last, and the bills in the hands of persons who may now receive them, will be entirely worthless."

COUNTERFEITS.—Counterfeit five dollar notes of the Bank of New-Brunswick, says the New-York Mercantile, with fictitious signatures, and evidently filled up with the same hand, are in circulation. The plate is a genuine one, and was probably stolen from the Bank, when it was robbed some time since.

SUDDEN DEATHS.—The Morris papers mention the sudden death of Mrs. Phœbe Schenck. She was found dead in a sitting posture, leaning against a post of the piazza, on Monday afternoon, though she had enjoyed usual health, and was engaged in her domestic duties during the day. An affection of the heart is one of the conjectured causes.

The wife of John Walter, of German Valley, it is also stated, dropped dead on Tuesday. She had been long afflicted with dropsy in the chest.

AGRICULTURE, &c.

From the Farmers' Register.

ON THE USE OF LIME AS A MANURE.

By M. Puvis.

Translated for the Farmers' Register from the *Annales de l'Agriculture Francaise*, of 1835.

The publication of the following communication to the *Annales de l'Agriculture Francaise*, was commenced in the February No. of that journal, (which was received here in May,) and the June No. contains the end of the first part, "*On Liming*," and enables us to offer the translation of that portion to our readers. Only a few pages of the next portion of the series, "*On Marling*," has yet appeared, and not enough to permit a judgment to be formed of its worth.

Though there are many deficiencies in this treatise on liming—and also opinions as to the theory of the action of lime, in which we cannot coincide—still, on the whole, we consider it as presenting far more correct views, and more satisfactory information, both on theory and practice, than any other work on liming that we have before seen. In other points, and those of most importance, the facts here presented, (and now first learned from any European authority,) strongly sustain the views maintained in the *Essay on Calcareous Manures*. It would be both unnecessary and obtrusive to remind the reader of these points of difference, and of agreement, whenever passages exhibiting either may occur. They will, therefore, generally be submitted in the author's words, without comment. A few exceptions only to this rule will be made, in cases which appear particularly to call for them.

We have no information whatever of M. Puvis, the author of this treatise, previous to the appearance of the commencement of the publication in the *Annales*. But he is evidently well informed on his subject, and is stated by the introductory remarks of the French editor, to be entitled to all respect, for his long experience, and his practical, as well as scientific investigation of the subject. If, then, there remains no ground to distrust his judgment, or his facts, the statements made are most important to a very large portion of this country, which has heretofore been generally supposed to be deprived of all possible benefit from the use of calcareous manures, on account of their remoteness and high price of carriage. M. Puvis states that the most successful and profitable liming in Europe (for the expense incurred) is in repeated applications of very small dressings—making less, on the average, than four bushels of lime to the acre, annually. This small amount, *if really as efficacious as is alleged*, would cost so little in labor and money, that the limits of the region capable of being limed may be very far extended. It would not matter though the applications should require to be repeated forever, provided the annual returns gave good profit upon the annual expenses; and far greater will be the profit, if (as we think) the soil ultimately will no longer require such repetitions—or only at very distant intervals of time—and still be a highly productive, because it has been made a calcareous and fertile soil.—[Ed. Farm. Reg.]

On the Different Modes of Improving the Soil.

To improve the soil is to modify its composition in such manner as to render it more fertile.

This definition, which might be extended to manures charged with vegetable mould [*humus*] or animal substances, which also modify the composition of the soil, is limited by French agriculture to substances which act upon the soil, or upon plants, without containing any notable proportion of animal or vegetable matter.

It is said that manures, [putrescent or enriching,] serve for the nutriment of plants. But it is the same as to substances improving to the soil, which furnish to it matters which it needs to be fruitful, and which furnish to vegetables, the earth and saline compounds which enter as essential elements in their composition, their texture and their products. Such improving substances ought well to be regarded as nutritive.*

Thus lime, marl, and all the calcareous compounds employed in agriculture, since they furnish lime and its compounds, which sometimes form half of the fixed principles of vegetables, ought also to be considered as aliments; or, what comes to the same, as furnishing a part of the substance of vegetables. Thus again, wood-ashes, pounded bones, burnt bones, which furnish to vegetation the calcareous and saline phosphates which compose a sixth of the fixed principles of the stalks, and three-fourths of their seeds, ought well to be considered, and surely are, nutritive.

What then particularly marks the distinction between manures which improve the soil [*amendemens*] and alimentary manures, [*engrais*] is, that the former furnish, for the greater part, the fixed principles of vegetables, the earths, and salts, which are abundantly diffused throughout the atmosphere, whence vegetables draw them, by means of suitable organs: and what is most remarkable, is, that the vegetable, by receiving the fixed principles of which it has need, acquires, as we shall see, a greater energy to gather for its sustenance the volatile principles which the atmosphore contains.

The greater part then of soils, to be carried to the highest rate of productiveness, require manures to improve their constitution. Alimentary manures give much vigor to the leafy products—but they multiply weeds, both by favoring their growth, and conveying their seeds—and they often cause crops of [small grain] to be lodged, when they are heavy. Manures which improve the soil, more particularly aid the formation of the seeds, give more solidity to the stalks, and prevent the falling of the plants. But it is in the simultaneous employment of these two means of fertilization by which we give to the soil all the active power of which it is susceptible. They are necessary to each other, doubling their action reciprocally; and whenever they are employed together, fertility goes on without ceasing—increasing, instead of diminishing.

The greater part of improving substances are calcareous compounds. Their effect is decided upon all soils which do not contain lime, and we shall see that three-fourths, perhaps, of the lands of France are in that state. The soils not calcareous, whatever may be their culture, and whatever may be the quantity of manure lavished on them, are not suitable for all products—are often cold and moist, and are covered with seeds. Calcareous manures, by giving the lime which is wanting in such soils, complete their advantages, render the tillage more easy, destroy the weeds, and fit the soil for all products.

The improving substances have been called *stimulants*; they have been thus designated because it was believed that their effect consisted only in stimulating the soil and the plants. This designation is faulty, because it would place these substances in a false point of view. It would make it seem that they brought nothing to the soil, nor to plants—and yet their principal effect is to give both principles which are wanting. Thus the main effect of calcareous manures proceeds from their giving, on the one hand, to the soil the calcareous principle which it does not contain, and which is necessary to develope its full action on the atmosphere—and on the other hand, to vegetables, the quantity which they require of this principle, for their frame work and their intimate constitution. It would then be a better definition than that above, to say that to *improve* the soil is to give to it the principles which it requires, and does not contain.

Importance of Manures which improve the Constituiion of Soils.

The question of improving manures is of great interest to agriculture. This means of meliorating the soil is too little known, and above all, too little practised in a great part of France—and yet it is a condition absolutely necessary to the agricultural prosperity of a country. In the neighborhood of great cities, alimentary manures being furnished on good terms, may well vivify the soil; but animal manures cannot suffice but in a few situations, and of small extent—and in every country where tillage is highly prosperous, improving manures are in use. The Department of the North (of France) Belgium, and England owe to them, in a great measure, their prosperity. The Department of the North, (which is, of all Europe, the country where agriculture is best practised, and the most productive,) spends every year, upon two thirds of its soil, a million of francs in lime, marl, ashes of peat and of dead coal, [*houille**] and it is principally to these agents, and not to the quality of the soil, that the superiority of its production is owing. The best of its soil makes part of the same basin, is of the same formation, and same quality, as a great part of Artois and Picardy, of which the products are scarcely equal to half the rate of the North. Neither is it the quantity of meadow land which causes its superiority; *that* makes but the fifth part of its extent, and Lille, the best *Arrondissement*, has scarcely a twentieth of its surface in meadow, while Avesne, the worst of all, has one-third. Nor can any great additional value be attributed to the artificial meadows, since they are not met with except in the twenty-sixth part of the whole space. Neither can this honor be due to the suppression of naked fallows, since in this country of pattern husbandry, they yet take up one-sixth of the ploughed land,

* The two classes of manures which are described generally above, are conveniently designated in French each by a single word. "*Engrais*," which we can only translate as manure, is limited in signification to such substances as directly enrich soils, and feed growing plants—and "*amendemens*," signifying substances which alter and improve the constitution, texture, and indirectly, the fertility of soil, but the operation of which is not to furnish food to plants. In speaking of the *action* of these different classes, the sense may be rendered, though not very precisely, by the words "enrich," and "improve"—but there is no one English term that will convey the meaning of either class of substances. "Alimentary manures" will be used for the first class, and "manures improving the constitution of soil," or some similar awkward, but descriptive phrase, can only render the meaning of the word "amendemens"—useless "improvers" could be tolerated as a substitute, for convenience. Ta.

* Statisque du department du Nord.

every year. Finally, the Flemings have but one head of large cattle for every two hectares* of land, a proportion exceeded in a great part of France. Their great products then are due to their excellent economy and use of manures, to the assiduous labor of the farmers, to courses of crops well arranged, but above all, we think, to the improvers of soil, which they join to their alimentary manures. Two thirds of their land receive these regularly: and it is to the reciprocal action of these agents of melioration, that appears to be due the uninterrupted succession of fecundity, which astonishes all those who are not accustomed continually to see the products of this region.

At this moment, upon all points in France, agriculture, after the example of the other arts of industry, is bringing forth improvements; in all parts especially, cultivators are trying, or wishing to try, lime, marl, ashes, animal black. It is this particular point in progress, above all, for which light is wanting; and this opinion has induced the preparation of this publication. Since more than thirty years, the author has devoted himself, from inclination, to agriculture; but he has been especially attentive to calcareous manures. He has studied in the practice of much extent of country, in his own particularly, in personal experiments, and in what has been written on them both by foreigners and countrymen. An *Essay on Marl*† has been the first fruit of his labors; an *Essay on the use of Lime* will soon be ready: it is with these materials that he now sets himself to work. To prepare for this object, a series of articles, of the nature of a recapitulation rather than of a regular work, it was necessary to be concise, and yet not to omit any thing essential. It is proper then that he should limit himself to the prominent parts of his subject, those especially useful to practice. His advice will then be as often empirical as regular, and his directions will be precise, although supported by few developements.

An extract from this work has appeared in the *Encyclopedie Agricole:* here it will again appear, but by separate articles, which will be corrected by a systematic general view of theory, founded on practice. This is the moment for multiplying publications on this subject, because that in almost all parts of France, it is the point in agriculture most controverted,—that which induces the most labor and the greatest expenditures—which presents most doubts—and which has consequently most need of being made clear.

We shall not enlarge here upon the manner in which improving manures act: we will put off this important question, with its developements to the article on lime. Here we only present the theory. Hereafter, that which we will hazard will be founded upon facts, and yet we will not promise these developements, but for the purpose of enlightening and directing practice.

* The hectare is very nearly equal to two and a half English (or American) acres. See account of French Weights and Measures, p. 506. Vol. II. Farm. Reg.—Tr.

† *Essai sur la marne*, published 1826, at Paris. This is the first notice which we have had of the existence of this work, and have forthwith sent for a copy, as well as for one of the author's forthcoming *Essay on the use of Lime*, that no source of information on this important subject may be excluded. But it may be inferred (from the author's expressions) that these more extended works will contain nothing more of what is essential, than is presented in this condensed form, prepared by himself for the *Annales*. Ed. Far. Reg.

Of the various kinds of Improving Manures.

The first in order, and the most important, are the calcareous manures. We comprehend under this name, lime, marl, old plastering mortar, and other rubbish of demolished buildings, beds of fossil shells, [*falun*]* or shelly substances, plaster or gypsum: experience and reason will prove that we ought to arrange in the same class, and by side of the others, wood ashes, ground bones, and burnt bones. We will not place in the same list the ashes of peat, of dead coal, and red pyrotous ashes: their effect is not owing to their lime, but (as will be seen afterwards,) rather to the effect of fire upon the earthy parts, and particularly upon the argil which they contain.

We will next in order treat of manures of the sea, or saline manure of different kinds, of mixtures of earth, of calcined clay: and finally, of paring and burning the turf, and the different questions which peat presents in agriculture.

Of Liming—On the Use of Lime for the Improvement of Soil.

1. Among the immense variety of substances, and of combinations which compose the upper layers of the globe, the earthy substances, silex, alumine, and lime, form almost exclusively the surface soil: the greater portion of other substances being unfit to aid vegetation, they ought to be very rare upon a surface where the Supreme Author willed to call forth and to preserve the millions of species of beings of all nature, which were to live on its products.

It was also a great benefit to man, whose intelligence was to be exercised upon the surface of the soil, to have so few in number the substances proper to support vegetation. The art of agriculture, already so complex, which receives from so many circumstances such diverse modifications, if there had been added new elements much more complicated, would have been above the reach of human intelligence.

2. But among these substance, the two first, silex and alumine, form almost exclusively three-fourths of soils; the third, the carbonate of lime, is found more or less mixed in the other fourth: all soils in which the latter earth is found, have similar characters, producing certain families of vegetables which cannot succeed in those in which it is not contained.

The calcareous element seems to be in the soil a means and a principle of friability. Soils which contain calcareous earth in suitable proportions, suffer but little from moisture, and let pass easily, to the lower beds, the superabundance of water, and consequently drain themselves with facility. Grain and leguminous crops, the oleaginous plants, and the greater part of the vegetables of commerce, succeed well on these soils.

It is among these soils, that almost all good lands are found. Nevertheless, the abundance of the crlcareous principle is more often injurious than useful. Thus it is among soils composed principally of carbonate of lime that we meet with the most arid and barren, as Lousy Champagne, part of Yonne, and some parts of Berry.

3. The analysis of the best soils has shown that they rarely contain beyond 10 per cent. of carbonate of lime; and those of the highest grade of quality seem to contain but from 3 to 5 per cent. Thus the analysis of Messrs. Berthier and Drapiez, show 3 per cent. of it in the celebrated soil of the environs of Lille.

4. But all these properties, all these advantages, all these products, calcareous manures bear with them to the soils which do not contain the calcareous principle. It is sufficient to spread them in very small proportions: a quantity of lime which does not exceed the thousandth part of the tilled surface layer of the soil, a like proportion of drawn ashes, or a two-hundreth part (or even less) of marl, are sufficient to modify the nature, change the products, and increase by one-half the crops of a soil destitute of the calcareous principle. This principle, then, is necessary to be furnished to those soils which do not contain it; it is then a kind of condiment disposed by nature to meliorate poor soils, and to give to them fertility.

Ancient Date of the Use of Lime.

5. Lime, as it appears, has long ago been used in many countries. However, nothing proves that its effect was well known to the Greeks and Romans, the then civilized portion of mankind. Their old agricultural writers do not speak of the use of lime on cultivated lands, nor on meadows. Pliny, the naturalist, tells us, however, that it was in use for vines, for olives, and for cherry trees, the fruit of which it made more forward: and he speaks of its being used on the soil generally in two provinces of Gaul, those of the Pictones and Ædui,* whose fields lime rendeded more fruitful. The agriculture of the barbarians was then, in this particular, more advanced than that of the Romans. After that, all trace of the use of lime in agriculture, is lost for a long time—whether that it had ceased to be used, or only that the notice of it was omitted by writers on agriculture. The trace is again recovered with Bernard Pellissy, who recommends the use of it in compost in moist lands, and speaks of his use of it in the Ardennes. Nearly a century later, Olivier de Serres,† advises its employment in the same manner, and reports that they made use of it in the provinces of Gueldres and Juliers [in Belgium]. He makes no mention of its use in France: but as the practices of agriculture were not then much brought together, and were but little known, it may be believed that at that time, Flanders, Belgium, and Normandy, made use of lime.

In England, liming seems to have been in use earlier and more generally than in France. But then, and in all time since, good agricultural practices have remained in the particular countries where they were established, without being spread abroad. Now, novelties carry no alarm with them—and in the last twenty years, liming has made more progress than in the two preceding centuries.

Of Soils suitable for Liming.

6. Lime, as has been said before, suits the soils which do not contain it already. To distinguish these soils from others, chemical analysis is, without doubt, the surest means; but it offers often too many difficulties, and lime may be met with in a soil in proportion great enough to exert its power on vegetation, without producing ef-

* "*Falun.*—Beds formed by shells There is one of these immense beds in Touraine. The cultivators of that country use this shelly earth to improve their fields." This definition is from Rozier's *Cours Complet*, and though it clearly shows that the substance in question is the same as what is called "marl" in Virginia, it is equally clear that neither of these authors consider *falun* as being *marl*. Tr.

* *Ædui et Pictones calce uberrimos fecere agros.*

† Who wrote on agriculture in the reign of Henry IV. of France. Tr.

fervescence with acids.* But visible characters may furnish indications almost certain. The soils where the cow wheat, [*melampyre*], rest-harrow, [*l'ononis, ou arrete-bauf*], thistles, colt's foot, [*tussilage*], and red popy, spring spontaneously—which produce well in wheat, legumes, (or plants of the pea kind), and especially sainfoin—where the chestnut succeeds badly—which shows but little of dog's-tooth, [*chiendent*], volunteer grasses, or common weeds, [*graminess adventices*], except of the small leguminous kinds—soils which, after being dry, crumble with the first rain—all these are almost certainly calcareous, have no need of lime, nor its compounds†, and would feel from their use, rather ill than good effects.

On the contrary, all soils composed of the moulderings [*debris*] of granite or schistus, almost all sandy soils, those which are moist and cold of the immense argilo-silicious table lands [*plateaux argilo-silicieux*] which separate the basins of great rivers‡ [*petit ajonc*] the heath, *les petits carex blancs*, the whitish moss spring spontaneously—almost all the soils infested with *avoine a chapelets*, with dog's-tooth, with bent grass [*agrostis,*] red sorrel, and the little feverfew—that soil where, unless so clayey as to offer great difficulty to cultivation, only rye, potatoes, and buckwheat, can be made, and where sainfoin and the greater part of the crops of commerce cannot succeed—where, however, trees of all kinds, and especially the resinous kinds, the woodpine, the sea pine, the larch, the northern pine, and the chestnut, thrive better than in the best land—all these soils are without the calcareous principle, and all the improving manures in which it is found, would give to these the qualities of, and nourish the growths peculiar to calcareous soils.

But there, more than elsewhere, it is especially necessary to avoid too much haste. Liming upon a great scale, ought not to be done, until after having succeeded in samll experiments on many different parts of the ground designed to be improved.

Extent of Surface to which Lime is suitable.

7. A great proportion of the soil of France does not contain the calcareous principle. The country of primitive formation—the mountains of which the rock is not calcareous—many soils even, of which the subsoils inclose calcareous formations—the great and last alluvion which has covered the surface, and which still composes it wherever the return waters have not carried it off with them—also extensive surfaces, in the composition of which the calcareous principle had not entered but in small proportions, and which small amount has been used by the successions of vegetation—all these kinds of soil, which compose at least three-fourths of the surface of France, to be fertilized, demand calcareous manures. If it is admitted that one-third of all this space has already received aid from lime, marl, ashes of wood, or of peat, of bones burnt, or pounded, there will still remain the half of France to be improved by such means: an immense task, doubtless—but of which the results will be still more prodigious, since it will cause the products of all this great space to be increased by one-half, or more.

Of the various Modes of Applying Lime to the Soil.

8. Three principal procedures are in usage for applying lime. The first is the most simple, and is the most general wherever lime is obtained cheaply, and where culture is but little advanced in perfection, and hand labor is dear. This consists in putting the lime [the burned limestone] immediately on the ground in little heaps at 20 feet average distance, and each heap containing, according to the rate of limiting, between a cubic foot of the stone, to half that quantity. When the lime has been slaked by exposure to the air, and has fallen into powder, it is spread over the surface, so as to be equally divided.

9. The second mode differs from the first in this respect: the heaps of stone are covered with a coat of earth, about six inches thick, according to the size of the heap, and which is equal to five or six times the bulk of the lime. When the lime begins to swell, by slaking, the cracks and openings in the heap are filled with earth: and when the lime is reduced to powder, each heap is worked over, so as to mix thoroughly the lime and the earth. If nothing hurries the labor, this last operation is repeated at the end of 15 days—and then after waiting two weeks more, the mixture is spread over the soil.

10. The third process, which is adopted where culture is more perfect, where lime is dear, and which combines all the advantages of liming without offering any of their inconveniences, consists in making compost heaps of lime and earth, or mould. For that, there is first made a bed of earth, mould, or turf, of a foot, or thereabout, in thickness. The clods are chopped down, and then is spread over a layer of unslaked lime of a hectolitre* for the 20 cubic feet, or a ton to the 45 cubic feet of earth. Upon this lime, there is placed another layer of earth, equal in thickness to the first, then a second layer of lime; and then the heap is finished by a third layer of earth. If the earth is moist, and the lime recently burned, 8 or 10 days will suffice to slake it completely. Then the heap is cut down and well mixed—and this operation is repeated afterwards before using the manure, which is delayed as long as possible, because the power of the effect on the soil is increased with the age of the compost—and especially if it has been made with the earth containing much vegetable mould. This method is the one most used in Belgium and Flanders: it is becoming almost the exclusive practice in Normandy: it is the only practice, and followed with the greatest success, in La Sarthe. Lime in compost is never injurious to the soil. It carries with it the surplus of alimentary manure which the surplus of product demands for its sustenance. Light soils, sandy or gravelly, are not tired by repetitions of this compost. No country, nor author, charges lime, used in this state, with having been injurious to the soil. In short, this means seems to us the most sure, the most useful, and the least expensive mode of applying lime as manure.

11. The reduction of burnt lime to powder by means of a momentary immersion in water, in handle-baskets, serves much to hasten the slaking, whether the lime is to be applied immediately to the soil, or in compost heaps—some hours in this manner sufficing, in place of waiting two weeks. however, the effect of lime, in this state, may well be different, as we have then the hydrate of lime, and less of the carbonate of caustic lime.* If great rains follow, this process is not without inconveniences, because then the lime, which is already saturated with water, is more easily put in the state of mortar, which ought to be avoided more than every other injury to the manure.

The reduction of burnt limestone to powder, whether it be spontaneous, or by immersion, produces in the compost a bulk greater by one-half or more, than that of the stone—10 cubic feet, producing 15—or a ton, 10 cubic feet. This increase is not uniform with all kinds of lime; it is more strong with rich [*grasses,*] waters, and weaker with the poor [*eaux maigres.*†]

Liming, as practised in different Countries. In the Department of Ain.

12. The applications of lime in Ain date from fifty years back. At the present time, the soil which has been limed is still more productive than the neighboring, not limed. Nevertheless, liming is but beginning to extend, while marling, which was begun fifteen years later, has already covered many thousands of hectares. This is because marling is an operatin within the means of poor cultivators, being accomplished by labor alone; while liming requires considerable advances, especially in this country where lime is dear, and the dose given is heavy.

The dressings vary in quantity, from 60 to 100 hectolitres the hectare, according to the nature of the ground, and often according to the caprice of the cultivators. Although these limings have not been made with all the care and economy that was desirable, they have been very efficacious, when the soil has been sufficiently drained. The following tables, extracted from the

---

* This is a full though indirect admission of the truth of the doctrine of *neutral soils*, maintained in the Essay on Calcareous Manures. Tr.

† Though both the truth and the usefulness of this passage, in general, are admitted, yet it is incorrect in the position that none of the "compounds of lime" would be advantageously employed on calcareous soils. On the contrary, the sulphate of lime (gypsum), the most important compound as a manure, next to the carbonate, is most effective where the land has lime in some other form: and indeed, (as has been maintained elsewhere,) it seems generally inert and useless on soils very deficient in lime.—[Essay on Calcareous Manures, pp. 50, 92.]

‡ The character of the lands called by the author "*plateaux argilo-silicieux*," and which he refers to frequently in the course of his essay, can only be gathered from the context. They are poor, intractable under tillage, and but little pervious to water. The name indicates their composition to be silicious and aluminous earth almost entirely. It may be inferred that such lands resemble in soil the elevated level *ridges*, which in lower Viaginia separate different water courses, and especially those which, in addition to being miserably poor, are remarkably close, stiff, and "water holding"—and are in some places called "cold livery land," "pipe-clay," or "cray-fish" soils. Soil of this kind, and of the most marked character, is particularly described at page 40, Essay on Calcareous Manures, 2d ed. M. Puvis elsewhere speaks of this "argilo-silicieux" soil as being found every where in France, and as known in different places under the various names of "terrian blanc," "blanche terre," in the south, "boulbenne," in the north, of "terre clytre," and "terre a bois"—and the basin of the Loire, "terre de Sologne." The last name would direct us to the lands of Sologne, which furnish it, as it may be presumed, as being of like quality. Arthur Young says, "Sologne is one of the poorest and most unimproved provinces of the kingdom, and one of the most singular countries I have seen. It is flat, consisting of a poor sand or gravel, everywhere on a clay or marl bottom, retentive of water to such a degree that every ditch and hole was full of it." Tr.

* The hectolitre contains 6102.8 English cubic inches, or is equal to 2 82, (or about 2.6-7) Winchester bushels. Therefore the hectolitre is rather more in proportion to the hectare, than our bushel is to the acre. The decalitre (named next page) is the tenth of a hectolitre, and of course the "double decalitre," is the fifth. Tr.

* An incorrect expression certainly, but literally translated. Tr.

† We are unable to give the meaning, with certainty, of these provincial terms. They are probably equivalent to our "hard and soft" water—terms which are as little descriptive of what they mean, as the French "*eaux grasses*" and "*eaux maigres.*"

registers of three contiguous domains, belonging to M. Armand, three years before, and nine years during the progress of liming, give us the means of appreciating the results. The quantities of seed and of crops, are calculated in double decalitres, or in measures of fifths of hectolitres.

Table of product of the domain of La Croisette.

YEARS.	RYE.		WHEAT.	
	Seed.	Product.	Seed.	Product.
1822	110	600	24	146
1823	110	764	24	136
1824	110	744	24	156
1825	107	406	27	251
1826	106	576	28	210
1827	100	504	30	249
1828	90	634	36	391
1829	82	538	48	309
1830	60	307	60	459
1831	78	350	40	417
1832	55	478	68	816
1833	61	529	52	545

Table of product of the domain of Mizeriat.

YEARS.	RYE.		WHEAT.	
	Seed.	Product.	Seed.	Product.
1822	120	487	16	100
1823	120	708	16	103
1824	120	644	18	84
1825	112	504	28	228
1826	120	677	20	115
1827	115	594	20	162
1828	118	726	40	328
1829	104	566	41	277
1830	79	298	71	477
1831	91	416	43	326
1832	79	411	75	786
1833	76	616	48	351

Table of product of the domain of La Baronne.

YEARS.	RYE.		WHEAT.	
	Seed.	Product.	Seed.	Product.
1822	110	505	22	180
1823	110	643	22	138
1824	110	662	24	149
1825	102	398	32	252
1826	110	612	32	187
1827	107	546	34	204
1828	98	696	38	343
1829	84	608	40	268
1830	91	389	59	374
1831	92	411	40	295
1832	70	512	80	649
1833	75	511	51	471

The application of 3000 hectolitres [8,490 bushels] of lime, of the value of 6000 francs [$1116] upon 32 hectares [80 acres] of ground, made successively during nine years, has then more than doubled the crops of winter grain, the seed being deducted. The other crops of the farms have received a proportional increase; and the revenue of the proprietor, in doubling, has annually increased two-thirds more than the amount of the sum expended in the purchase of lime. Still, there is not yet half the arable land limed, since of 66 hectares, only 32 have received this improvement.

The products of 1834 are still greater than those of 1833. But these are sufficient to prove the importance and utility of applying lime to suitable soils.

Many other examples sustain these results; and from them all it appears, that the wheat seedings are increased from double to triple—that the rye lands, from bringing four to five [to one of seed] in rye, are able to bring six to eight in wheat—and that other products are increased in proportion. The melioration then is, relatively, much greater upon bad ground than upon good, since it is two-thirds and more on the wheat land, and on the rye lands the crop is increased in value three-fold.

Flemish Liming.

13. The use of calcareous manures in the department of the North, as in Belgium, appears to be as old as good farming. It is now much less frequent in Belgium. The ancient and repeated limings have, as it seems furnished to great part of the soil, all that is necessary to it, for the present. But the department of the North still receives lime, marl, or ashes, every where, or nearly so, where lime is not a component ingredient of the soil. They distinguish in this country two kinds of liming. The first [*chaulage foncier,*] consists in giving to the soil every 10 or 12 years, before seed time, four cubic metres, or 40 hectolitres of lime to the hectare.* They often mix with the slaked lime, ashes of dead coal, or of peat, which enter into the mixture in the proportion of from a third to a half, and take the place of an equal quantity of lime. The other mode of liming [*chaulage d'assolement,*] is given in compost, and at every renewal of the rotation, or upon the crop of spring grain. It is also in regular use in this country, still more than in Belgium, upon the meadows, on cold pasture lands, which do not receive the waters of irrigation. It warms the ground, and increases and improves its products. The older the compost is, the greater its effect, which lasts from 15 to 20 years, at the end of which time the dressing is renewed.

14. The limings of Normandy, the most ancient of France, are kept up in the neighborhood of Bayeux, while elsewhere they are forbidden in the leases: however, now they go over all the surface which has need of them; but in place of being applied immediately to the soil, as in the ancient method, the lime is almost always put in compost.

Liming of La Sarthe.

15. Of the modes of using lime, that of La Sarthe seems preferable. It is at once economical and productive, and secures the soil from all exhaustion. It is given every three years, at each renewal of the rotation, in the average quantity of 10 hectolitres to the hectare,† in compost made in advance, with seven or eight parts of mould, or of good earth, to one of lime. They use this compost on the land for the autumn sowing, and placed alternately with rows of farmyard manure. This method, of which the success is greater from day to day, is extending on the great body of flat argilo-silicious lands, which border the Loire; and it would seem that this method ought to be adopted every where, on open soils that permit surplus water to drain off easily.—On very moist soils the dose of lime ought perhaps to be increased.

We would desire much to inculcate with force the suitableness, and eminent advantages, of using at the same time lime and [alimentary] manure. Here they do better still, in using at the same time a compost of lime with earth and dung. In addition, during the half century that the Manceaux have been liming, the productiveness of the soil has not ceased to increase.

16. The countries of which we have spoken, are those of France in which liming is most general. However, more than half the departments I think, have commenced the use, and in a sixth, or nearly, it seems to be established. Doubtless, the first trials do not succeed every where. There is required a rare combination of conditions for new experiments, even when they have succeeded, to induce their imitation by the great mass. Still, successful results are multiplied, and become the centres of impulse, from which meliorations extend.

English Liming.

17. The English limings seem to be established upon quite another principle from that of France. They are given with such prodigality, that the melioration upon the limed soil, has no need to be renewed afterwards. Whilst that in France we are content to give from a thousandth to a hundredth of lime to the tillable soil, from 10 to 100 hectolitres the hectare, they give in England from one to six hundredths, or from 100 to 600 hectolitres the hectare. The full success of the method of our country might make us regard the English method as an unnecessary waste. It seems that they sacrifice a capital five, six, ten times greater, without obtaining from it a result much superior; and that without lavishing [alimentary] manures also afterwards, that the future value of the soil would be endangered, in the hands of a greedy cultivator.

We will not urge the condemnation of a practice which seems to have resulted in few inconveniencies. The abundance of alimentary manures which the English farmer gives to his [limed] soils, has guarded against exhaustion: and then, in very moist ground, they have doubtless by the heavy liming, made the soil healthy, and its nature seems modified for a long time to come; and such kinds, and where *humus* abounds, will take up a heavy dose of lime, and as it seems, always without inconvenient consequences; there is then formed there the *humate of lime* in the greatest proportion, and we will see that this combination is a great means of productiveness in the soil.*

(To be continued.)

* 46 bushels to the acre, English or American measure.

† 111 bushels to the acre.

* In this passage the author distinctly affirms the truth of the chemical combination in the soil of calcareous and vegetable (or other putrescent)—or the power of calcareous earth to fix and retain enriching matter—which is maintained in the *Essay on Calcareous manures*, (pp. 30, 31,) to be the most important action of calcareous matter as an ingredient of soil.—Still M. Puvis seems to attach much less importance to this than to other agencies of lime, which are considered in the Essay as of little value in comparison. Tr.

Extract of a letter, dated Mobile, Dec. 19, 1835.—"Our Cotton market is very quiet since the Liverpool accounts of Oct. 30th, and the Message is daily expected. Our rivers are low, and supplies light."

A letter from New Orleans, dated Dec. 19, states, "that business was very dull, and little doing. Sales of Cotton limited."

NEW-YORK AMERICAN.

DECEMBER 26, 1835—JANUARY 2, 1836.

LITERARY NOTICES.

THE AMERICAN MONTHLY MAGAZINE for January, 1836. New York, GEO. DEARBORN. Boston, E. R. BROADERS.—This Magazine comes to us enlarged by the incorporation with it of the New England Magazine, heretofore edited by *Park D. Benjamin*, who will continue as a joint editor of the periodical. It is handsomely printed, on fine paper, and has an etching of the grave diggers scene in Hamlet, executed with great spirit.

The first paper, by COLE, on American Scenery, is written with the taste and fervor of the artist, who has made to live on canvass, some of the very scenes he so well describes.

The paper on Miss Sedgwick's novels, does not overpraise the truly American character and tendency of her writings.

From another paper, "The Altar of Ammon," which is cleverly conceived as a frame wherein to set scattered offerings, we copy one—so happily characterized as "a gem of his double art, from the poet painter of our country."

These lines form the subject of a picture lately painted by the author, for *Mr. N. Appleton:*

ROSALIA.—*By Washington Allston.*

Oh, pour upon my soul again
That sad, unearthly strain,
That seems from other worlds to plain;
Thus falling, falling from afar,
As if some melancholy star
Had mingled with her light her sighs,
And dropped them from the skies.

No—never came from aught below
This melody of wo,
That makes my heart to overflow
As from a thousand gushing springs
Unknown before; that with it brings
This nameless light—if light it be—
That veils the world I see.

For all I see around me wears
The hue of other spheres;
And something blent of smiles and tears.
Comes from the very air I breathe.
Oh, nothing, sure, the stars beneath,
Can mould a sadness like to this—
So like angelic bliss.

So, at that dreamy hour of day
When the last lingering ray
Slopes on the highest cloud to play—
So thought the gentle Rosalie
As on her maiden reverie
First fell the strain of him who stole
In music to her soul.

We extract entire the curious article, which follows, on American Antiquities:

ANTIQUITIES OF NORTH AMERICA.

In the history of our country every thing relating to the *earliest* inhabitants must be interesting, not only to the professed antiquary but to the general reader. There is much evidence to show, that the post diluvian earth was originally one continent—that this country, America, was peopled from CENTRAL ASIA, before the dismemberment of that single continent—that the people brought with them the manners, arts, and civilizations of Central Asia; perhaps the very manners, arts, arms, and modes of warfare described in the Homeric poems; and that, sometime after America was separated from the other continent, immense hordes from the NORTH OF ASIA crossed Behring's Straits, and gradually took possession of the country.

Before these barbarian invaders the inhabitants retired south into Mexico, carrying with them the arts and civilization that afterward so astonished their more modern invaders from Spain.

It is a fact well known in history, that Cortes found in Mexico arms and utensils such as are known to have been used in Asia Minor, and such as have been found nowhere else. And the discoveries recently made at Palenqué and Vehemel, plainly point to Central Asia as the country of their origin.

That the Indians found here by the discoverers were not the original inhabitants, has, we believe, never been disputed; on the contrary, it has ever been acknowledged that there was a distinct race anterior to them. But whence came this race, whither they went, and what monuments they have left here, are questions that have afforded matter for much speculation. It has generally been believed that the mounds in the western country are the work of their hands, notwithstanding that some ingenious gentlemen have lately argued, perhaps to their own conviction, that the mounds are the direct work of nature, and raised by the action of water. But as to the mounds, we leave the question where we find it—the old race have left other monuments.

The Indians found here by the discoverers, in fact never pretended to be the *original* inhabitants; but had a tradition, that their forefathers came into the country across the sea—probably Behring's Straits—that they found the country inhabited—that with the inhabitants they waged a long war, and ultimately drove them south into the sea.—Such was the tradition—the fact probably was, that the conquered people retired to Mexico.

The Mexicans also had a tradition strongly corroborative of this—that their forefathers lived at the north for many ages, and then gradually emigrated south.

These traditions alone, without any other evidence, afford ground for a strong presumption that the territory, now the United States, was inhabited by a race that afterwards peopled Mexico.—But the evidence does not stop here; there are other facts that go far to reduce the presumption to a certainty.

The Mexicans worked the metals for various purposes of use and ornament; the Indians found here by the discoverers never used the metals in any way; but wood, stone, shells, &c. supplied them with weapons and ornaments. Hatchets, swords, and arrow-heads of *brass* have been found in various parts of the United States, many of them in good preservation. These, although rude in form and design, are yet skilfully made; but with that pains-taking and laborious skill that ever marked the infancy of the arts.

But it may be asked, why are not these relics more frequently discovered, if it be true that a whole nation, to whom the manufacture of them was known, were once transient dwellers in this land? We think the wonder should rather be, how many of them have been preserved. The preservation of the few that have been found must undoubtedly be ascribed to the nature of the soil at the time of their deposit. Since in some soils, and under some circumstances, they would be preserved by earthy particles, uniting themselves with the salts of the brass in the first stages of oxydation, and thus forming a sort of petrified incrustation that would prevent decay.

But a discussion of these theories is not intended, since it would necessarily involve speculations too prolix and discussive for the limits of this paper; the main object of which is, to give a description of what we consider the most interesting relic of antiquity ever discovered in North America—the remains of a human body, armed with a breast-plate, a species of mail and arrows of *brass*; which remains we suppose to have belonged either to one of the race who inhabited this country for a time anterior to the so called Aborigines, and afterwards settled in Mexico or Guatamala, or to one of the crew of some Phœnician vessel, that, blown out of her course, thus discovered the western world long before the Christian era.

These remains were found in the town of Fall River, in Bristol county, Massachusetts, about eighteen months since.

In digging down a hill near the village, a large mass of earth slid off, leaving in the bank, and partially uncovered, a human skull, which on examination was found to belong to a body buried in a sitting posture; the head being about one foot below what had been for many years the surface of the ground. The surrounding earth was carefully removed, and the body found to be enveloped in a covering of coarse bark of a dark color. Within this envelope were found the remains of another of coarse cloth, made of fine bark, and about the texture of a Manilla coffee bag. On the breast was a plate of brass, thirteen inches long, six broad at the upper end and five at the lower. This plate appears to have been cast, and is from one eighth to three thirty-seconds of an inch in thickness. It is so much corroded, that whether or not any thing was engraved upon it has not yet been ascertained. It is oval in form—the edges being irregular, apparently made so by corrosion.

Below the breast plate, and entirely encircling the body, was a belt composed of brass tubes, each four and a half inches in length, and three sixteenths of an inch in diameter, arranged longitudinally and close together; the length of a tube being the width of the belt. The tubes are of thin brass, cast upon hollow reeds, and were fastened together by pieces of sinew. This belt was so placed as to protect the lower parts of the body below the breast-plate. The arrows are of brass, thin, flat, and triangular in shape, with a round hole cut through near the base. The shaft was fastened to the head by inserting the latter in an opening at the end of the wood, and then tying it with a sinew through the round hole—a mode of constructing the weapon never practised by the Indians, not even with their arrows of thin shell.—Part of the shaft still remains on some of them.—When first discovered the arrows were in a sort of a quiver of bark, which fell in pieces when exposed to the air.

The skull is much decayed, but the teeth are sound, and apparently those of a young man.—The pelvis is much decayed, and the smaller bones of the lower extremities are gone.

The integuments of the right knee, for four or five inches above and below, are in good preservation, apparently the size and shape of life, although quite black.

Considerable flesh is still preserved on the hands and arms, but none on the shoulders and elbows, On the back, under the belt, and for two inches above and below, the skin and flesh are in good preservation, and have the appearance of being tanned. The chest is much compressed, but the upper viscera are probably entire. The arms are bent up not crossed; so that the hands turned inward touch the shoulders. The stature is about five and a half feet. Much of the exterior envelope was decayed, and the inner one appeared to be preserved only where it had been in contact with the brass.

The following sketch will give our readers an idea of the posture of the figure and position of the armor. When the remains were discovered the arms were brought rather closer to the body than in the engraving. Th arrows were near the right knee.

[This sketch we have no means of giving.]

The preservation of this body may be the result of some embalming process; and this hypothesis is strengthened by the fact, that the skin has the appearance of having been tanned; or it may be the accidental result of the action of the salts of the brass during oxydation; and this latter hypothesis is supported by the fact, that the skin and flesh have been preserved only where they have been in contact with, or quite near, the brass; or we may account for the preservation of the whole by supposing the presence of *saltpetre* in the soil at the time of the deposit. In either way, the preservation of the remains is fully accounted for, and upon known chemical principles.

That the body was not one of the Indians, we think needs no argument. We have seen some of the drawings taken from the sculptures found at Palenqué, and in those the figures are represented with breast-plates, although smaller than the plate found at Fall River. On the figures at Palenqué the bracelets and anklets appear to be of a manufacture precisely similar to the belt of tubes just described. These figures also have helmets precisely answering the description of the helmet of Homer's *megas kowthaiolos Ektor*.

If the body found at Fall River be one of the Asiatic race, who transiently settled in Central North America, and afterwards went to Mexico and founded those cities, in exploring the mines of which such astonishing discoveries have recently been made; then we may well suppose also that it is one of the race whose exploits with the *kalkerea doura* have, although without a date and almost without a certain name, been immortalized by the Father of Poetry; and who, probably, in still earlier times, constructed the *Cloacæ* under *ancient* Rome, which have been absurdly enough ascribed to one of the Tarquins, in whose time the whole population of Rome would have been insufficient for a work, that would, moreover, have been useless when finished. Of this GREAT RACE, who founded cities and empires in their eastward march, and are finally lost in South America, the Romans seem to have had a glimmering tradition in the story of Evander.

But we rather incline to the belief that the remains found at Fall River belonged to one of the crew of a Phœnician vessel.

The spot where they were found is on the sea

coast, and in the immediate neighborhood of "Dighton Rock," famed for its hieroglyphic inscription, of which no sufficient explanation has yet been given; and near which rock brazen vessels have been found. If this latter hypothesis be adopted, a part of it is, that these mariners—the unwilling and unfortunate discoverers of a new world—lived sometime after they landed; and having written their names, perhaps their epitaphs, upon the rock at Dighton, died, and were buried by the natives. J. S.

ILLUSTRATIONS OF THE SKETCH BOOK OF GEOFFRY CRAYON, Gent., in outline, by C. MAYZ. New York, WILEY & LONG.—No. I. of these really clever and spirited Sketches—by an artist, who, if encouraged, proposes to go on and illustrate in like manner the other writings of *Irving*—refers to *Rip Van Winkle.*

We have here four plates—1. *Rip* escaping with his gun into the woods, from a scolding; 2. His meeting with the spirit of Hendrick Hudson; 3. His awaking; 4. His return to his village. They are very well done.

THE AMERICAN IN ENGLAND, by "the author of A Year in Spain." 2 vols. New York, HARPER & BROTHERS.—It may be some indication of the character of these volumes to say, that we read them through at a sitting—and as we are not omnivorous and are somewhat critical, we conclude to our own satisfaction, from this fact, that the book is a good one. Having begun at the beginning, by which we mean the preface, we expected no more than it is there set down we were to expect "a faithful narrative of whatever the author saw during a visit of a few weeks to England"—and that in the uninviting months of November and December. This narrative is given with grace, spirit, and orignality. The writer sees with his own eyes, and judges with his own judgment, and herein alone, we apprehend, in this imitative world, is a great merit. There is nothing even attempted in these pages, of politics, statistics, nor other grave and important, and, for the most part, uninteresting topics connected with history and government—but simply a succession of impressions made upon an observing and reflecting man, as he journeyed hastily through a land of strangers—who yet, by reason of common origin and language, were not all strangers. We had intended to give some detached sketches—but our limits forbid—today at least. Meantime our readers will hardly fail of amusement, if they read the book for themselves.

[The rest of the Weekly Review is unavoidably shut out.]

The Committee of 125 held an important meeting on Thursday evening at the Mayor's office, at which the following among other proceedings were had. The Mayor presented the following letter from Senator VAN SCHAICK:—

"Mr. Van Schaick will be safe in advising the Citizens of New York that the Commissioners of the Canal fund are desirous to do whatever may be within their power and consistent with their duty, to relieve the citizens of New York from the consequences of the late calamity by fire, and that if they can have an assurance that a premium of 8 per cent will be offered, they will immediately advertise $860,000 Chenango Canal Loan, bearing an interest at 5 per cent and redeemable at the pleasure of the Commissioners after the year 1845; and in case the loan should be taken by one or more Banks in New York, (having a capital of double the amount to be deposited,) the Commissioners will deposit the money with such Banks at an interest of 4 1-2 per cent payable quarterly, until the money shall be required in the progress of the Canal. Always however reserving to the Commissioners the right to draw at pleasure in case they shall deem the deposit unsafe.

Laid on the table.

Mr. Graham from the Committee on Insurance, made the following Report:

NEW-YORK, Dec. 31st, 1835.

SIR—The undersigned being a Committee appointed at a meeting of the General Committee of Citizens on the 21st inst., "to confer with the Insolvent Fire Insurance Companies, and to ascertain the bearing of the law and equity on claims upon them for losses incurred by the late fire and on the undetermined risks, and to endeavor to establish uniform principles of action by the said Companies," respectfully Report.

That in pursuance of their Trust, they have met the delegates from the Insolvent Companies, and those which apprehended they might be so, and have dilligently and deliberately considered the questions which have been discussed and the difficulties which have been stated, and have given legal opinions on several of the points raised, with a view of aiding the Companies in the adjustment of their concerns.

We have likewise prepared and now report two several Bills which we are of opinion ought to be submitted without delay to the Legislature. They appear to us to be well calculated to afford relief to all parties concerned, without impairing the obligation of Contracts or the existing vested rights of any of them. The one Bill is intended to facilitate the adjustment of losses and the relief to which Creditors of the Insolvent Companies may be entitled. The other Bill is intended to revive and restore to their original vigor and action those Companies whose Capitals may have been absorbed in the calamity, as well as those Companies whose Capitals have been impaired and reduced.

That the Bills will meet the wishes entirely of any persons concerned in Insurance Contracts or in Insurance Capital, is hardly to be expected. There is intrinsic difficulty in affording relief to sufferers as Holders of Stock, and preserve unimpaired the rights of Creditors as holders of Policies. It was indispensable that nothing should be done to touch those rights, and it was most desirable that every proper means should be devised to afford prompt, easy, and economical relief to the Insurance Creditors, so far as legal provisions could afford it. So it has been deemed a matter of the utmost importance to the Commerce and Business of the city, that the Fire Insurance Companies should have the means of reviving their Capitals under better auspices than heretofore, and that some encouragement might thereby be afforded to suffering Stockholders.

Under these impressions the undersigned have prepared and agreed to the two Bills which they now have the honor to present. They have gone as far in the provisions as their sense of duty, and the legal rights of all parties in interest would permit them,

We have the honor to be
with great respect,
yours, &c.

JAMES KENT,
DAVID B. OGDEN,
P. A. JAY,
DANIEL LORD, Jr.
JOHN LORIMORE GRAHAM.

To the Hon. Cornelius W. Lawrence, Chairman.

Mr. DISOSWAY, from the Committee on losses, made the following Report:

The Committee appointed to ascertain the amount of losses by the fire on the 16th and 17th of December, submit the following Report, as the result of their investigations.

At the commencement of their labors, they published a notice requesting those who were interested to present statements of their respective damages from the fire. This course of enquiry they were obliged to adopt, as all private exertions on the subject became entirely useless, from the vastness of the undertaking. From the numerous accounts that were accordingly submitted, the Committee have learned of losses and insurance as follows:

	Buildings destroyed.	Stock destroyed.	Insurance on Stock and Buildings.
South street,	$ 65,500	$ 786,250	$ 900,700
Front street,	168,500	542,160	661,700
Water street,	99,000	259,311	241,300
Pearl street,	223,200	2,515,000	3,334,000
William street,	100,500	904,725	1,194,000
Exchange place and Old slip,	120,400	1,021,900	1,015,000
Merchant street,	178,000	333,600	336,000
Hanover square and Stone street,	8,000	180,000	255,450
Coenties slip,	7,000	8,300	11,000
Merch'ts Exc'ge,	150,000		
Gardan st. church,	50,000		20,000
	$1,179,700	$6,557,846	$7,969,150

The value of 129 of the buildings destroyed, according to the above statement, is $1,179,700
And of stock, 6,557,846
Making the total loss reported to the Committee, $7,737,546
Upon this amount, those interested, also show insurance effected to the sum of $7,969,150

These statements were made by 276 firms and owners of real estate; which latter class, however, form but a small part. From a vast majority of owners of buildings, no accounts have been presented.

The Committee have thus stated, in the foregoing particulars, all the facts which have come to heir knowledge, during the investigation committed to their charge. As it regards the total destruction of property by the terrible conflagration that visited our city, we are compelled to make our calculations from the data now before us, and such other aid, as the Committee can place reliance upon.

The whole number of buildings destroyed, is ascertained to be 527, exclusive of the Exchange and the South Dutch Church, and may be fairly valued at $4,000,000, which is a fraction over $7,000 each, and is generally considered a correct estimate. As far as the Committee can ascertain, less than one half only of the mercantile houses have reported their loss in goods by the late fire. By duplicating this, amount, (6,557,846) we have $13,115,692

As the probable total sum destroyed in Merchandize of all descriptions. Add to this, the estimated value in buildings, $4,000,000
And the whole loss may be calculated at $17,115,692.

Judging from the property destroyed in stores upon the different str-ets, and the business of those who occupied them, there has been consumed, as reported, in Groceries, Foreign and Domestic Produce, $1,596,000
In Imported and Domestic Dry Goods, including an inconsiderable item of Hardware and Crockery, $4,961,615
And in Real Estate, $1,179,700

The Committee are of opinion that the above calculations are in no respect exaggerated. And great as the loss has been, they cannot conclude their report, without expressing their hope, that our city, from the various plans of relief, now proposed, will, ere long, Phenix like, arise from the ashes of her late misfortune, to her usual commanding, uninterrupted and prosperous business.

GABRIEL P. DISOSWAY, *Chairman.*

Nathaniel Weed, B. L. Woolley, Walter R. Jones.

The Committee to whom was referred the duty of devising some means for the relief of the widows, orphans, and others, who lose by fire insurance stocks—reported a plan, calling on the State to ask from the General Government a loan of *six millions*, at 3 per cent., which it should invest in the bonds and mortgages of the Companies, and with the difference of interest received, and that paid, to constitute a fund, out of which the losses of stockholders should be defrayed. This report was, after discussion, laid on the table.

A proposition, by Mr. P. L. Miles, for a loan from the State of *fifteen millions* to the Banks in this city, was lost.

On motion of Mr. W. B. Lawrence, it was Resolved, That the Chairman memorialize the Legislature for the repeal of the law taxing foreign capital vested in bonds and mortgages.

SUDDEN REVERSE—The Easton Argus relates the death, at Stonewater village, of a young lady, Miss Winslow—by being overturned in a sleigh on going home from a wedding party. She was taken up senseless and carried back to the bridal circle, she had but a few minutes before left—and shortly died.

Rochester Edge-Tools.—Among the various branches of business now in successful operation in the city of Rochester, none are more deserving of attention than the manufacture of Edge-Tools. To such perfection is this carried, that nearly all descriptions of the article can be furnished from our manufactories with a *finish* and at a *price* which are rapidly giving them a preference over the wares of Sheffield and Brummagem. Mechanics and others who use such articles have a deep interest in enconraging our own manufactories—as thereby they can have tools *warranted* of the first quality, while the encouragement bestowed on our own artizans promotes our domestic welfare, and aids in insuring an excellent supply at reasonable prices from our own workshops.

The Edge-Tools fabricated by Messrs. *Barton & Babcock*, are creditable to themselves and to the character of our mechanic arts. All who have used them concur in their praise. The manufactory is in the stone building at the southwest corner of the main bridge across the river. They employ about twenty-five hands, on an average—consume from 12 to 14 tons of iron, 8,000 lbs. cast steel, 500 lb. of borax, 30,000 bushels of charcoal, &c. Judging from the success of the experiment which they have already made, their business will soon be greatly extended, as the excellence of their manufactures becomes as generally known as it deserves to be.

We can bear willing testimony to the correctness of the encomium passed by "Rho," on the gentlemen and articles referred to in the above notice. We speak from personal observation and inspection—and would recommend them to the patronage of the public.—[Ed. M. M.]

The Laboring Classes in Europe.—The North American Review for October, commences a discussion of this subject, which, if the conclusion equals the present portion, ought to be circulated by thousands, as a tract, throughout the land.

The writer of the interesting article to which we have just referred, notices the condition of the laboring classes in Europe, in respect "to the rate of wages, the burden of taxation, the means of subsistence, the facilities of acquiring education, and the share, if any, which these classes have in the government." The facts, in regard to each of these particulars, ought to make those hang their heads with shame, who, in this community, talk of the oppression of the laboring classes by the rich, and of the withholding of rights from the common people.

In Norway, "the ordinary food of the peasantry is bread and gruel, both prepared of oatmeal, with an occasional intermixture of dried fish. Meat is a luxury which they rarely enjoy."

In Sweden, the dress of the peasantry is prescribed by law. "Their food consists of hard bread, dried fish and gruel, without meat."

In Denmark, the peasantry are still held in bondage, and are bought and sold together with the land on which they labor."

In Russia, "the bondage of the peasantry is even more complete than it is in Denmark." The nobles own all the land in the empire, and the peasantry, who reside upon it, are transferred with the estate.

"A great majority have only cottages, one portion of which is occupied by the family, while the other is appropriated to domestic animals. Few, if any, have beds, but they sleep upon bare boards, or upon parts of the immense stoves by which their houses are warmed. Their food consists of black bread, cabbage, and other vegetables, without any addition of butter."

In Poland, "the nobles are the proprietors of the land, and the peasants are slaves." A recent traveller says, "I travelled in every direction, and never saw a wheaten loaf to the eastward of the Rhine, in any part of Northern Germany, Poland, or Denmark. The common food of the peasantry of Poland, 'the working men, is cabbage, potatoes, sometimes, but not generally, peas, black bread and soup, or rather gruel, without the addition of butter or meat."

In Austria, "the nobles are the proprietors of the land, and the peasants are compelled to work for their masters during every day of the week, excepting Sunday. The cultivators of the soil are in a state of bondage."

In Hungary their state is, if possible, still worse. The nobles own the land, do no work, and pay no taxes. The laboring classes are obliged to repair all the highways and bridges, are liable at any time to have soldiers quartered upon them, and are compelled to pay one-tenth of the produce of their labor to the church, and one-ninth to the lord whose land they occupy.

Of the people of France, "seven and a half millions do not eat meat, or wheaten bread. They live upon barley, rye, buckwheat, chesnuts, and a few potatoes." [We saw it stated, the other day, that some workmen, we forget in what part of New-England, had a turn-out because their employers would not furnish them with tea and coffee at dinner!]

The common wages of a hard laborer, in France, is $37 50 for a man, and $18 75 for a woman, annually. "The taxes upon the land are equal to one-fifth of its nett products."

In 1791, there were 700,000 houses in Ireland. Of these, 113,000 were occupied by paupers—and more than 500,000 had only one hearth. The average wages of a laborer is from nine and a half to eleven cents a day.

Among the laboring classes of the industrious Scotch, "meat, except on Sundays, is rarely used."

In England, the price of labor varies. "The Nottingham stocking-weavers, as stated by them in a public address, after working from fourteen to sixteen hours in a day, only earned from four to seven shillings a week, and were obliged to subsist upon bread and water, or potatoes and salt!"

The American Quarterly Review will be published hereafter by Mr. Adam Waldie, favourably known as the proprietor of the Select Circulating Library. George M. Wharton, Esq., of the Philadelphia Bar, has been associated with it as co-proprietor and co-editor. Mr. Wharton has been a distinguished contributor heretofore to its pages.

From the South.—The steam packet *Columbia*, brings Charleston papers to Saturday last. The news of the great fire in New York had reached Charleston, and created a strong feeling of sympathy for the sufferers. It was suggested that a general meeting of merchants should be held, to unite with the citizens of Philadelphia and other places, in urging upon congress to adopt some measure of relief for the New York merchants.

Seminole Indians.—The Southern Patriot of Saturday, contains the following paragraph:—

"We learn from a passenger arrived this forenoon in the schooner Medium, from Musquito, E. F., that the Seminoles had embodied themselves at Alauchway, about the time our informant left, which was on the 15th inst., to the number of 1500 strong, and that a party of wood cutters, twenty-five in number, had been fired on by them and driven away last Saturday. They had chartered a vessel and sailed for Attakapas.

"All the females of Musquito county had been removed to St. Augustine, for safety, and the men about Alauchway were sleeping in Log Houses, for greater security. The alarm of the inhabitants in the vicinity is represented, as may be supposed, to be very great."

New-Orleans, Dec. 15.

Latest from Texas.

Our previous accounts from San Antonio were to the 25th. By an arrival yesterday, we have information two days later from the seat of War in Texas.

Our informant states that a detachment of Gen. Cos' Cavalry, out procuring grain for the horses, were attacked on the 27th ult. by a party of Texians and by them defeated with the loss of thirty-five horses, and suffering in killed and wounded, to the number of fifty men. The loss of the Texians, three men-slightly wounded. Cos' detachment of Cavalry consisted of about 150 men, which, before the engagement was concluded, were re-inforced by 190 infantry; the party of Texians employed in the assault amounting to about the same number.

Gen. Meher Defeated at Tampico.—Intelligence was received in town last evening by a member of Gen. Meher's corps, who came passenger in the schr. Halcyon, that the schooner Mary Jane (which took Gen. M. and his company to Tampico) was lost on the Bar, in attempting to get in. The crew and company arrived safe on shore. The General then marched to the fort at Tampico, which he took possion of without opposition, and attacked the town at night, but was repulsed with the loss of several killed and twenty-two taken prisoner—the remainder, including Gen. Meher, escaped, and took passage on board a vessel for Brazoria, where they safely arrived—many of whom are waiting an opportunity to return to this city.

The following incident is related without a word of comment, in the Louisville Journal! as though it was a mere matter of course thus to shoot a manacled and unarmed man:—

A few weeks ago, one D. W. Crenshaw, a member of the Murel gang and a notorious horse-thief and negro-stealer, was confined, for crime, in the jail at Woodville, Mississippi. Before his imprisonment, he was heard to make remarks, which excited a suspicion, that he intended to take the life of Dr. Webb, a respectable physician, and the principal witness against one of Crenshaw's accomplices. Dr. W., never having seen Crenshaw, called at the prison for that purpose. His name, however, was no sooner announced by the Jailer, than the prisoner, who was of Herculean stature and strength, started up and rushed furiously upon him, with the intent, it is supposed, of killing him with his handcuffs. The Doctor, with admirable presence of mind, instantly drew a pistol and shot his assailant, who died a day or two afterwards.